SEQUENCE LISTING

<110> Gary L. Breton

<120> NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO BACTEROIDES FRAGILIS
FOR DIAGNOSTICS AND THERAPEUTICS

<130> 2709.1001-001

<160> 10444

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<211> 420
<212> DNA
<213> B.fragilis

<400> 1
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<213> B.fragilis
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<212> DNA
<213> B.fragilis
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<212> DNA
<213> B.fragilis

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<211> 2514
<212> DNA
<213> B.fragilis

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<211> 1221
<212> DNA
<213> B.fragilis

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<211> 3258
<212> DNA
<213> B.fragilis

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gatgctgata gtgaattgat tcctggtaaa tatcctttga tacgtatgaa taatgccgaa    3000
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<210> 9
<211> 198
<212> DNA
<213> B.fragilis
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tcatgggcac aggcacccgg actcatgggc ccaggtatac aggacgaagt aaagatcgca    180
ccatttccaa ctaattaa                                                  198
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<210> 10
<211> 2175
<212> DNA
<213> B.fragilis
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aaaccggaaa cagatgtgcg tgccgatgcc gtgatggtat acggaacgct ggataagaaa    180
ggcgttactt ttgagcaacg cgttcaatcg tggagagaca aagggtaccg ggccgagttt    240
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tattcgtttg tggccaagag cccgttgcat acgactaatg cttcgaggat attgctccct    2040
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gaagagcgtt cgcgtaccct gctcttgaag ttcgagaacg accccgccgg cgtgcaagta    2160
gatattgaat ggtaa                                                       2175
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<210> 11
<211> 258
<212> DNA
<213> B.fragilis

<400> 11
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aggtataagg atgaagatac cggttcagac ggcgtaaact cacttccgga acttgagcta     180
tcttattcag ccggtgtctg tttttttctta ttaaagcaag caaaaaggac aattatcaac    240
ttgaaaataa agaaataa                                                    258
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<210> 12
<211> 1482
<212> DNA
<213> B.fragilis

<400> 12
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acttgtgtgg cagatgctat tcagaaagac aaccgtccgg aacccgctaa gcgtctgttc     180
cgttcgcagg ctgtagaaaa cgaaatcata cgtgtacaga aactgttgcg taactcaaag     240
ctggcctgga tgtttaccaa ttgtttcccc aatacactgg ataccaccgt acacttccgc     300
aaaggcaaag acggcaaacc cgatactttt gtatatacag gagatattca tgccatgtgg     360
ctccgtgact cgggggctca ggtatggcct tatgtacaac tggccaattc cgatccggaa     420
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tatgccaatg cgttcaatga tggccctaaa ggggtgaat ggatgagcga cctgacggat      540
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caggcaatca ccaacatatt gcgtactttt aaggaacaac agcgcaaaga cggtgtgggt     720
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gcaaacgagg tggaaacagc cctgaagaaa tatgccgttt acaatcatcc caaatacgga    1020
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gttccgagcc tgctggcaat gccttatctg ggtgatgtgt cgattgatga tccgatttat    1140
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tttacccgtg cctggtttgc atggcagaat actttgttcg gtgagttgat cctgaaactg    1440
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<210> 13
<211> 3624
<212> DNA
<213> B.fragilis

<400> 13
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catctggaca ctcagtggaa ctgggatgta cagactacca ttaaagagta tgtatggaac     180
acgatcaacc agaacctgtt tctgctgaaa aagtatccga actatgtatt caactttgaa     240
ggcggagtga aatatgcctg gatgaaggag tactatcctg cacaatacga agaaatgaag     300
aagtacatcg gggaaggccg ctggcacatt tccggaagta gctgggatgc aacggacgct     360
```

```
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<210> 14
<211> 1860
<212> DNA

<213> B.fragilis

<400> 14

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gaaaacatga atcgttatta tagaaatcca ttgaaatgtc tacctaaaca ttattatgct  1800
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<210> 15
<211> 1284
<212> DNA
<213> B.fragilis

<400> 15

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<210> 16
<211> 477
<212> DNA
<213> B.fragilis

<400> 16
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caacagtcgg aaagacaggt gcagcaagtt cctttccttc aattcaactt cgatgaacag    180
ggaggagaga cagcccgtaa cagtggaaga ggaggctcaa aatatgatgc ccggatcacc    240
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tgggtctatc tgaatgaaca gtctgacaac caaacggtgt gtcttcacca cgggagctgg    420
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<210> 17
<211> 1011
<212> DNA
<213> B.fragilis

<400> 17
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tatagccttc ccgaccctac ggttatcaag gcagatgatg gttattatta cctgtacgca    180
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gcaccggata taaataaaat cggtgatcgg tatgtgatgt attactccat gtctgtttgg    360
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gcaggcacag cctatgaagg aacttatatt cacaaacggg gaggctatta ctacttgtttt    660
gcctctatcg gtcgttgctg tgaaggatta aagagtacgt ataccacagt ggtggggcgg    720
tcgaaatact tatttggccc ttatgtagat aaaaaagggg aatcgatgct ggagaatcat    780
catgaagtgc tgattgataa aaatgaagca ttcgtgggtc ccgggcacaa ctcggagatc    840
gtaacagatg ataaaggagc ggattgggtg ttttatcacg ctgtcagtgt ggccaatcct    900
gaaggaagag tgttgatgct cgaccgtgta aactggaaaa aagggtggcc tgttgtagag    960
ggtgatacac cgtcgttgca agcaaaagca cctgttatcc agcataaata a           1011
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<210> 18
<211> 444
<212> DNA
<213> B.fragilis

<400> 18
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attaattgta ttatgaacaa gaaattcttt atcgcaatgt tggcatttgc attatttggt     60
atgacaaatg taatggctaa tacatcgaag gatgaagtag tagaagtaag tagcacgaat    120
aaagtgacag ctactgagta ttatttagaa gctgcgggac agagtggatc tggtctttttt    180
tattctattg aactttttaga ttcctctcaa agaaaactaa agattactgc aaaaagagga    240
cttcgtattg aaataaattg tcacggacat ggaattgttc cagatgatcg tttattctat    300
acatctgaca gttggactgg agaggtaata actgatgaaa ttaatactga agcttttact    360
ataagtacta gttataatga aagtgctggt agtagctcta cgactaaata tgaaactcgg    420
tattattata ttagagaaag atag                                           444
```

<210> 19
<211> 486
<212> DNA
<213> B.fragilis

<400> 19
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ggcaaaaaca tgaaaaacaa agtactgatc atagtagcta tcttattact tcttcccaat      60
gcaatggcat gggcacatca gcccgcagac ggaaacctga agcattttac aaagaaagac     120
gcgacgacgg cgatggatgc ttttcattct acttttttata atccggatat gaagttgtat     180
gccatatctt cggatatgaa aggaagagct gccatctggg tacaggctat ctattgggat     240
atgattatga acgcgtataa acgtacgaag gctcctaaat atcgccggtt gatagaagag     300
gtgtatcagg gaggatacga acaatacgat aaatacaatt gggacaataa aatcgaatgg     360
tttatttatg atgatatgat gtggtggatt atttcgctgg cacgtgctta cgaaatcacg     420
aatgacccga aatacctggc acatgcctct tcgggattct acccatgtct ggaaagagtc     480
gtatga                                                               486
```

<210> 20
<211> 723
<212> DNA
<213> B.fragilis

<400> 20
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aaagaaataa tgaaagcaat atccaaaatt ttttcagcac tactattggt aatgatagtt      60
gttaccagtt gtacaaagga taattatgat gctccggaat caatgctgac tggaaaggtc     120
gtttatgaag gagaggcttt gcaactgcgt ggaaatgagg cggtccgatt gttcctttat     180
caacgtggtt atgaaaagca tgatccgatt gaagtttttg taaatcaaga cggagcttat     240
tctgcatgtt tatttgatgg tgagtatcaa ttgatcacca aaagcggtaa tggcccttgg     300
tcagaagaag gccgtgatac tattaatgtt attgtctcag gcaatactgt acaaaatgta     360
gaagttgttc cttattacat ggtcagaaat gctgagatga aactaaatgg taatgttgtg     420
acagcttcct tcaatgtaga aaagattgcg ggaaaagaaa tagatcgtgt cttctttatg     480
ttaggaacaa ctcaatacat aaatgatggt gaacacaatg ttgatcgttt tgatgatgca     540
gatggcgcca aaatggctga aatcaatgta actggtgcac gttatgagtt tactcctaga     600
gactatacag acaataaaat gtttcaaaca gctttgaaaa gaggtactct ttttggccgt     660
atttgtatat ggccaaaagg ttctgatcaa ggaatttact ctgaagtaat ccgactgaaa     720
.taa                                                                  723
```

<210> 21
<211> 429
<212> DNA
<213> B.fragilis

<400> 21
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cttctaatat tatatataat gaacaaaaga tttattattg tattattagc atttgttttt      60
gtgagtatgg caaatgcaaa ggctgatatt cctaaagttt gggaagtaaa tggggtttat     120
acattagttg aagttgaatc tcccagtggc tatgggctta aaaatcaat tacaattgga      180
aatgagtatg cttacaattc tactgaaata aaaattgttg ttattgatgg tgtaaacagc     240
gttagaatag attgggttgc agaaggtaac cgatatcctg ttacgtatag cgttggttat     300
gacaataccg ttataatacc aaatttttg agacgtcgat ttattgtgag tgtagaatat     360
acatttgctg gaagtatggc tggaatacag tatgcttatg aaacgagagt ttttgagata     420
agatcttaa                                                            429
```

<210> 22
<211> 1263
<212> DNA
<213> B.fragilis

<400> 22
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gaaattcccc ctttttggagg aattttttca atcatggaaa aatttggact catgctttttc      60
acccgtaatg gactcaccct gggtaaaaga tgcaccagtt tcttcggata tcagttcagg     120
```

```
aggatagtcc gttcgctgat gagcgtttat ttctgtggcg gttcatgcgt ggaagatgta    180
acgtcacaac tgatgcgcca tctctcgtat catcctacct ttcgtacatg cagctctgat    240
accatcctca gagccatcaa ggaactgaca caggaaaaca tctcctatac ttccgaccaa    300
ggcaagacct atgatttcaa tactgcagac aaactcaaca cattgcttat aaacgctttg    360
gtttctacag gcgagttgaa ggaaattgag gaatacgatg ttgactttga ccatcagttc    420
cttgaaacgg agaagtatga tgcaaaaccg acctacaaaa agttcctcgg ctacaggcct    480
ggcgtatatg ttatcggtga caagatagtc tatatcgaga acagcgatgg taacacgaat    540
gtgcgttttc atcaggcaga cacccataag agattcttcg ctcttctgga atcccagaac    600
atccgtgtaa atcgcttcag ggcagactgc ggttcctgct cgaaggaaat cgtcagtgag    660
atagagaagc attgcaaaca tttctacatc cgtgccaacc gatgcagttc gctctacaat    720
gacatctttg ctctgagagg atggaagacg gaggagatta acggcatcca gttcgaactc    780
aattccattc tcgttgagaa atgggaaggc aagtgctatc gtcttgtcat ccagagacaa    840
agacgcaaca gtggcgacct tgacctgtgg gaaggcgaat acacttaccg ttgtattctg    900
accaacgatt acaagtcatc gacaagggac attgttgaat tctacaatct gcgtggcggc    960
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accatcatga gcaggcttga caccaaggct tttgggctca agaaaacgag tcgcataaag   1140
gcttttgtct tcagattcat ctccgtacct gccaagtgga tcatgactgc aaggcaatac   1200
gtgctgaata tctacacaga gaaccgagct tatgcaaaac ccttcaaaac agaattcgga   1260
taa                                                                 1263
```

<210> 23
<211> 2574
<212> DNA
<213> B.fragilis

<400> 23
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cgactaaaag aatcgcgttt cacgggccaa cgttttcggg aggcacaaga gcgggattat     60
cggcattatg accgtttTgt cgaaaaaatc atcccggatt ctgtcaattt ttaccggact    120
tatgtaaact atcactcttt cgagcgctat ctggagcgtt tgaagtggta taaacgcggg    180
ttagagaaac gttgggcaat acaggatgcc aggaaacgtc gtccggaccc tttgctgttg    240
cgttttgata tgttcaaccg tcaggtaggc aggcgggaca gcctgatgaa aagtcgtatg    300
ttggataact ctcaacgaat gattacccgg cagtggtggc gatacggtcg tgcatgggag    360
cggatgaatg acaccttaca gtttcaaagt aggcatctgc tggaacgttt ccgcttcttc    420
aacaataaat gggccgataa tgccgctttc caatccgatg gactgatagc ccgcaagaat    480
tattttcgcg acaaagcact gagtacccct atgtggcagg caaagcgtgc actctataaa    540
gcggacccgg atgctgcgat acgaatatat gcttctcgct ttggctattt taatgataaa    600
atggaacggc tggatgctac cctttaccga tattatcgca ccaaaggcgc gcgtgctgaa    660
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tacctgaacc gcaaccaatt aacggagaaa tatattcgtc gctacgagaa ggtgaaaaat    780
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gctactacgg tcaatcgtta tatcggtcgt tacgagtttc tgcgatcaac ttatccgcaa   1140
taccatttga tacgtaaatt gtataacata catccgcctg ctctgcggca tgcggcccgg   1200
caggcgagct atgaagagcg actggcacgt atcaattctc ttgattcgac cagtctgata   1260
aagatgttct ataatacaca gaaaattgcc cgtaatgagg cgcgtaaggc gatgaaagat   1320
acaaaatacc gtgatatcgt tcgtttttccg ttcaatcctg aagcgcagct cgatacggtg   1380
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tcggcacgta tgaaggtata tgtagttggt gatgtgctga atagtaatgg aagcaggttt   1500
tcccttccgt actcggatac gctgacttat ctggtgagtt cgatgactaa gtttgttgac   1560
aggacgccac gctttgttcg aaaaatagtt acccgtgatg cggaagcaaa tgctagtgta   1620
aacttttact ttccaaaaaa cagttttcgt atggatgaaa ctattgacat aaaccggcag   1680
ggagtgaagc aggtacataa ccttactctg gcattaatga ccgatccggt atatatcata   1740
gacagtctga cgcttttggc tacctcgtca cccgaaggta actggcacgt taatggagaa   1800
atatcccgaa aacgtgcgga atcaatccgt aatattttgg tggaggactt caaactgctt   1860
tatgattcat tggctatcgg tgctgctatc gagatggatg agacgggcaa catcatccgg   1920
```

```
caggagatga aggacgggat tccgaacttg ccggagttga taaagatacg taccgtacct    1980
gaggggtggg agaaactgcg ccgtctgatt gtaaatgata aaaattttca aggcaataaa    2040
ggtgcaatct tgagaattat tgatcgtgaa caggagcccg atcggcgcga atggctgatt    2100
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agggtggatt tccttttcag tctctcccgt cggggtatgc ggcaggacac actctatacc    2220
aatgaaccgg atacaatgta tgcccgagct gtggattatc tagagaaacg taaatatgag    2280
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ttgggatatg ataaggctgc cttacgaata cttgaacaat cgtcgcagac tgccgaaacc    2400
caatatatgc aggctattct gaatgctcgt ctgggtaatg agcagcgggc tgtatcgttg    2460
ttgctcagtg cggcggaagt ggatgaccgg ataagattcc gagccaatct agatccggaa    2520
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<210> 24
<211> 883
<212> DNA
<213> B.fragilis

<400> 24
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gccatagagc gcgtctactt ccagccccgt ggtgaagacc tattgaaaaa cgatgctttg    60
ttacctttaa ataaagaaaa gattaaatct gtagccgtag tagggccgtt tgccgattac    120
aattatttgg ggggatatag cggacagcct ccttattcgg ttagcctttt gaaaggagtg    180
aaggagctga taggtaaaaa agggaaagtc acttatctga acggaatggg aacctctgcg    240
gattctatag cgcaagtggt aaaaggggca gatatagtac ttgtagcttt gggtagtgat    300
gaaaaaatgg cacgagaaaa ccatgatatg ccttctattt atttaccgga gggacaagag    360
aagcttctaa aagagattta tcaggtgaat ccgagaattg tattggtttt ccacacggga    420
aatccgttga cttccgaatg ggcggataca catataccgg ctattatgca ggcttggtat    480
ccgggacagg aagcgggtag ggctttggcc aatttgctgt ttggaaatga aaatccgtcg    540
ggtaagttgc ctatgactat ctacagaacc gaagaacagt taccggatat actggatttt    600
gatatgtgga aagggcgtac ttatcgttat atgaaagggg aacctttata tggtttcggc    660
catggattga gttatacatc ttttgagttc gataatatac aagggaatga tactttgcag    720
ccggatgcga ttttacaatg ttcggtcgag ttatccaatt caggtcagtt agcaggagaa    780
gaagtggtcc aagtctatgt ttcgagggag aatactcctg tttacacata tccgttgaaa    840
aaattagtgg catttaaaaa agtaaaactt gctttcagtg aga                     883
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<210> 25
<211> 513
<212> DNA
<213> B.fragilis

<400> 25
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aaactgttac aatgtagaaa aagaaaagag gccctcatga cttcacttta tgattttttcc   60
gttttgaacc aaaacaacca agcaactccc ttggatagct atcgtggcaa agttctcttg    120
attgtcaaca ctgctactgg atgtggtttta acgccccagt accagggact tcaagaactc    180
tatgaacgct atcaagatca gggcttcgaa atattggatt tcccttgcaa tcagtttatg    240
ggacaagcac ccggcagcgc agaggaaatc aacgccttct gtagcctaca ttttcaaacc    300
accttcccac gttttgccaa gattaaggtc aacggtaagg aagcagaccc tctctatgtc    360
tggttaaaag accataaatc tggcccacta ggaaaacgaa tcgaatggaa tttcgctaag    420
tttctcatta gtcgtgatgg gcaagtcttt gaacgctttt cttcaaaaac agacccaaaa    480
caaattgaag aggcgataca aactctacta taa                                 513
```

<210> 26
<211> 273
<212> DNA
<213> B.fragilis

<400> 26
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aaggaggaaa acaaattgaa aatttttaag ggagagtttt atcgaatctc tgtattaaca    60
gacaagctag taaggttaga atactctcaa actggaagtt ttgaggatag aacgacacaa    120
cttatctata atagagattt tggccaagtt tcgttagatt atatcgagac atcaaacgta    180
```

```
ctagatatta tgacggacta ttttcatctg cactttaata aaggagaatt taacgccgaa    240
aatttattta tagaattaaa aggaaatttt gcc                                273
```

<210> 27
<211> 885
<212> DNA
<213> B.fragilis

<400> 27
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agacatgccc gtacgtacat gatgcgcaat gactggcaga acatgtatac cgctgcgacc    60
gatgtaatga attcagggca atacaatctg aatactcctt atgatgtcat cttcaccgat   120
gaaggcgaga acagcagtga gtcggtattc gagttgcaat gcgcatctac tgccgctttg   180
cccgcaagcg ataaaatcgg cagccagttc tgcgaagtac aaggtgtacg cggttccggc   240
caatgggacc tcggctgggg atggcacatg ggaaccgagc tgatgggtga agcgttcgaa   300
ccgggcgacc cccgcaaaga tgctacgctg ctttacttcc gtcgttcgga tactgatccg   360
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ggttttttggg taaatatccg cattatccgc tatggtgacg tggtgctgat ggctgccgag   540
tcggccaatg aattgggtaa aacaggtgaa gcttccaact atctggaaat ggtacgagcc   600
cgcgcccgtg gcaacaaccc ggacattctg cctaaagtga cttcattaga tcagaccgtg   660
ctgcgtgatg ccatccgcca cgaacgacgg gtagaactgg gactggaatc gggacgtttc   720
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tatcaaccca agaatgcctt gctaccgctt tcgcaggacg aaattgataa atcaaaaagc   840
gtactggtac agaacccgga ttatttagag cacaccacag agtaa                   885
```

<210> 28
<211> 1482
<212> DNA
<213> B.fragilis

<400> 28
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tcaacaaaca cttttatgaa tcaaaaatta ttgttcagta gcgcgttgct tgtcggcata    60
gcaggaacac aacaggcgct tgcacaaaaa aagaaagtcc aggatcaaaa gagacccaac   120
gtcgtttttca tcctggccga cgacctcgga ttcggtgacc tcagttgtta cggacaagag   180
aagttcgaaa ctcccaacat agacaagttg gctcaggaag gaatgcgctt cacccagtgt   240
tattcgggta ccactgtcag cgcccccttcg cgctcttgcc tgctgaccgg tacccacagt   300
ggacatacgg ccattcgtgg aaatgtagaa ctcgatccgg aaggacaatt ccctctaccg   360
gcagatgcac aaaccatctt ccacgatttc cagaacgcag gatacaagac cggcgctttc   420
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acttattctc aggatctgat tcactcaaag gcacttgact tcctcgatcg gatgggaaaa   660
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cccgaagaca gcattataaa gaagttccgc ggcaaatatc ccgaaaaacc tttccatgga   780
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ggcaagaatc cgtattatga actctataat ctcaattctg atccgtcgga acgacataat  1380
gtgctgaacc aatatccgga aaaggtgacg gaattgaagg ctatcatgca gtcatcgcat  1440
atacctaacc cgaacttccc gttacttccg ggagaaaaat aa                     1482
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<210> 29
<211> 1653

<212> DNA
<213> B.fragilis

<400> 29
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gagattgtcc ttgcccggga cactactcct tttattattg accgcagcac tacgattgtc   180
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gaaatgaccg gaaccgaggt tcgtgtatcg gacaaagaga aaagcagcaa tgctattatt   300
cttgctgtag actccacaat ggggcatccg gaaggttata aacttcaaat cactcctgaa   360
aaggttcttt tgacgggagg cagtgaagcc ggtgtctttt atggtatcca gactattcat   420
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cattggcacc tgaccgaaga tcagggatgg cgaatcgaaa tcaagaaata tcccaaactg   660
acagagatcg gttctaaacg agactctacc attatcgatt gggaaaccaa gaaattcgac   720
gggaagcccc atagcggatt ttatacacag gacgaagctc gtgagattgt tcgctatgct   780
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ctggcttctt atccggaact gggatgtaca ggtggtccgt acaaagtact ttgctcattc   900
ggtgtcttcc ccgatgtact ctgtgcgggt aatgaccaga cacttcagtt caccaaagat   960
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tggaccgaat ggacagccga ttcaacgaag atggagtggc agattctgcc ccgaatggct 1500
gctttgtccg aaatacaatg gacattgccg gagcataaga actttgagcg tttcatggag 1560
cgcctacccg agatgctgaa gatttattct tctctggatt atggttatcg ggaagatgta 1620
ttcgcggcgg ataccttgaa gactcataaa taa   1653

<210> 30
<211> 2943
<212> DNA
<213> B.fragilis

<400> 30
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tccctgaagg agggacttcc ctctactgta cgttgtgtct ataccgagcc aaaaggattt   180
gtatggatag gaaccaatgc aggattggga cgatttgacg gacaaaagct gagaaaatat   240
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gatattcaac ataatatatg gatactgaca gacggtggaa tagcgcaata tcgcaggtca   360
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caatataccg gagaaacacc gactcagtat aaagagaaaa taaggaaaag cagtaaggtg    2940
tag                                                                    2943
```

<210> 31
<211> 2361
<212> DNA
<213> B.fragilis

<400> 31
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cccggaacag cggaaaagcc gatggctact ttagaatatg cctggaaaaa ggcctcacgg    180
caggccggcc ggcgttccat caccatctac tgcgaaggca ccaactacct gtccgctccg    240
attcttatca caaacgagac ttcgggcaca cccgaacatc cgatccgttt ttcttcgtat    300
cccggacaaa aggcggtcat cagcggttcg cgtatactcc ggaacctgcg ttggaaagag    360
tataaaaacg gtatcatgca ggccaaagtg gaagaagaac tgatccccga ccagctcttt    420
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gcgggaggtt atctgcacgc catgcacagc agagaatggg gaggctacca atacagcatc    600
gaaggcaaag acgccaaggg cgaactgata ctgaaaggcg gatttcagaa caaccgccag    660
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cccctcaccc ccgactatcc ctcagactgc ctggtggacg acaatctgat tcactcgatc   1260
ggagagacag aaaagcaggg agccggtatc caactatcta tgtccgcacg aatcaccatc   1320
```

```
cgtaacaaca gtatttacga cctgccccgt gccggcatca acgtcagtga aggtacctgg      1380
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gggtccttca actcctgggg acgcgaccgc tattggcatc ccgaccggaa tgtgatggat      1500
gaattcgcga aagaacatcc tcaaatggta ttccgggacg ctaccgaaac gactgtcatc      1560
cgcaacaacc gctggaggtg cgaccatgga tgggacatcg atctggacga cggttcttcc      1620
aactatcaca tctacaacaa cctctgccta cacggaggat tgaaattgcg cgaaggcttc      1680
gcgcgaacgg tggaaaacaa cattatggtc aacaacacat tccatccgca cgtatggttt      1740
gcaaactctc aagacatttt ccgtcataac atcgtcacga ctccctatcg ccccattcag      1800
gtaaaggaat ggggaaagga aacagacact aacttttttg tcaccaagca aggactggaa      1860
caggcacaaa agagaggaac ggacctccat tcactttacg gtgatccgct cttcatcgct      1920
cctgaaaaag gagactaccg ggtaaaagaa aattcgcctg ccttgaagac ggggttccgg      1980
aatttcgata tggagcactt cggcgtacaa tgcccacacc tgaaagcttt ggcggctact      2040
ccgaaattgc cggttttcaa aattccggaa gaaaagccgg agacggtaca gacgtattcg      2100
tggaagggt taacattgaa agaggtgtcg accgaaggag aacgttcggc cacggggctc      2160
gacaaaatac gaggcatact ggtagtgcag gtcgaaaagg gaataaccgc cctgcaagcc      2220
aacgacgtga ttctgcgcat taacggcaaa ccggtagata accggacgga tatggaaacc      2280
gagatccgga agtcacccga aggcaataag ttccggatca tcttcttccg aaatcagaaa      2340
gaaaatgcgg taacgatgta a                                                 2361
```

```
<210> 32
<211> 1608
<212> DNA
<213> B.fragilis

<400> 32
tccctaatag aaaaactact tatgatgaac aatctaccat ccggaattct ctactcgctg       60
accggtgcgg cagctgtagc ttctttgact tcatgtgcca cgggcaaaca gaaagaagag      120
caaaaacctc tgaacattgt ttatattatg acggacgatc atacggcgca aatgatgagc      180
tgctacgata cccgttatat agaaactccc aacctcgatc gcattgcccg cgatggcgtg      240
cgctttacga attcttttgt agccaactca ctgagcggcc ccagccgtgc ctgcatgatc      300
accggcaaac atagctgtgc caataaattc tacgacaata cgacttgcgt gtttgacagt      360
gcccagcaaa ctttcccgaa actgcttcag aaagccggtt accaaaccgc tcttgtaggt      420
aagtggcact tggagagcct gccctcaggc ttcaattatt gggagattgt gcccggacaa      480
ggcgactatt ataatcccga cttcattaca caagataacg ataccgttca gaaacacggt      540
tatatcacca acctgatcac tgatgacgct atcgactgga tggagaataa gcgtgacgag      600
agcaaaccgt tttgcctgtt gattcatcat aaagctattc accgtaactg gatggcagat      660
acttgtaacc tggctttgta cgaggacaaa accttcccgc tacccgataa cttctttgac      720
gattacgaag gccgtccggc tgctgcggca caggagatga gtatcgtgaa ggacatggac      780
atgatttatg acctgaagat gctgcgtccg gataaggact cacgtctgaa atcactttat      840
cagaagtttc tgggacgtat ggacgaagga cagcgtgcgg catgggacaa gttctatggt      900
ccggtgatcg atgacttcta caagcaaaac ctgagtggga aggaattggc tgactggaag      960
ttccagcgct acatgcgcga ctacatgaag actgtgaagt cactggatga caatgtggga     1020
cgtgtgctcg actatcttga aaagaaggga ttactggaca acacgttggt ggtctatacc     1080
tccgaccagg gcttctatat gggcgaacac ggttggtttg acaagcgttt catgtatgaa     1140
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atcaccgaga tggttcagaa cattgactat gcacctactt cctcgaact ggccggtgct     1260
cccgttcctg ctgatataca gggtatgtca ttgctgccat tgctgaaagg cgaacagccc     1320
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aaacgtcatt atggaatacg taccgaacgc tataaactga tccatttcta taacgacatc     1440
aattggtggg aactgtatga catgcaagcc gacccgacgg aaatgcacaa tctgtacgga     1500
cagaaagagt atgagcctgt ggtgaaagag ctcaaagagc agatgctgaa gttgcaggaa     1560
caatacaatg atccggtgcg cttctctccg gagcgggata aagaatag                   1608
```

```
<210> 33
<211> 183
<212> DNA
<213> B.fragilis

<400> 33
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agttgtagtt tatctacaaa aaacgttgtg ttactctgtg ttactttgta ttactccgtg      60
ttactctgtg gtgaaaaagc ttttggtgaa cttttattta tgagtcttca aggtatccgc     120
cgcgaataca tcttcccgat aaccataatc cagagaagaa taaatcttca gcatctcggg     180
tag                                                                    183


<210> 34
<211> 1530
<212> DNA
<213> B.fragilis

<400> 34
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tcggccaaaa gccaggtgaa agaatctcga cccaatgtca tatatatcat aatggatgat     120
ctgggctacg gggatatcgg ttgttatggt tcggagaaaa tagaaacacc gaacatcgat     180
cggttgtata aggatggcat cagtttcaca cagcattaca caggttcacc cgtttcggca     240
cccgcccgct gtgtgttgat gacaggtatg cactcgggac atgcgcaaat ccgggctaat     300
gatgaaatgg cttatcgggg cgctatcatg aattacgact ccatgtatgt acatcccggt     360
ttggaggggc agtatccttt gaaagcccat accatgactc tcggaagaat gatgcagcaa     420
gccggatacg tcaccggatg ctttggaaaa tggggactgg gggctccggg cacggaaggt     480
actcccaaca aacagggatt cgacagtttc tacggataca actgccagcg gcaggcacac     540
agttattacc ccgccttttt gtataagaat gaagaccggg tatacttggc caataaagtg     600
ctcgatcctc acacgaccaa gctggatgca ggagccgacc cccgtgatga agccgcctat     660
gccaagttct cgcagaaaga gtatgccaat gatcttattt tcgatgaact gatttcgttt     720
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ccctacatcg gaaaagccgg atatatgcct tgtcgctatc cgcatgcgac ttatgctgct     900
atgatcagtt attttgacga gcaaataggc aagctgatag agaagctgaa gaaggaacgt     960
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agcgattctc cgtggttcga cagcggaggt cctttcaggt ctgagtatgg ttggggaaaa    1080
tgttttgttc acgaaggagg aatacgtatc cctgctattg tcacctggcc cgggaaaatc    1140
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gatatcgtaa acattgcttg tccggagacc gatggcatca gtttcttgcc tgctttgctt    1260
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ggcaactcta caatggagct ttatgacttg gagagtgatc ttagggaaga acatgatgtg    1440
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gagccggaga atcccaaatt caggttctga                                     1530


<210> 35
<211> 1272
<212> DNA
<213> B.fragilis

<400> 35
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atcaccgatt ttccacgggt gaaatggcgc agctttatgc tggattccgg acgccagtat     180
cagaaagtgt ctacgatcaa gaaatatatc gacatggctt cgatgctgaa gatgaattac     240
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gaagaggtga aagagatcat cggctatgcg gcggaccggg gcattacggt tgttcccgag     420
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aatgttgcgg taaaggttcc ccaaagcgga tttacgcaga atatattttg tgcgggaaaa     540
gacagtacac tcatcttcct gaagaatgtg ttggacgaag tatgccggat gtttccgtcc     600
gcttatattc atctcggagg cgacgaagca cctaaaggga attgggataa atgtcccgat     660
tgccggtcac ggattgaaaa agaaaaacta aaagacagtc atgacctaca attgtggttt     720
tcggcccgga tggccgatta tctgaaacaa aaagggagga aggccatctt ttggggagat     780
gtgatttaca aagacggcta ttccttgccg gacaatgtgg tgatacagtg gtggaactgg     840
agaggacacc gggatctggc cttgaagaat gccgtcagac ataattatcc ggtgatttgc     900
```

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ggtacaaact attatacgta tctgaacttc ccgcttaccc cctggaaggg atatactcaa    960
gctcgcactt tcgatctgga agatgtgtat ttgcgtaatc cttcttatag gccccgggag   1020
gaaaatccgc ttattctcgg aatgagctct gccttgtgga cggacgacgg ggtgacggaa   1080
agcatgatcg atcgtcgggt ctttccgcgt attctcgcac ttgccgagca gatgtggcat   1140
tccggcaatc cggaaaattt tgatgagttt tatggcaaag tactctctaa gcaactgtgg   1200
tttgaacagc aggggtattc attcgggcct gcattgaagg aagatgcggg tacaaattat   1260
aaatgggact aa                                                        1272
```

```
<210> 36
<211> 1464
<212> DNA
<213> B.fragilis
```

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<400> 36
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gtgcgtttgg cacaacctgt cacagcacaa atcgctaccg gcgaacatat cgccatcgta   120
ggacccaatg ggggagggaa aagcttgttt gtagacacgc ttttgggtaa atatcctttg   180
cgtgagggta cattggacta cgatttttct ccttcttcta cccggacggt atatgataac   240
gtgaaatata ttgctttccg tgacacctat ggggcggcgg atgccaacta ttactatcag   300
caacgctgga atgcccacga tcaggaagat gcccctacgg tgcgggagat gttgggagag   360
atcaaggatg aaagactgaa agaggaattg ttcgaactct ccacatcga gccattgttg   420
gacaagaaga tcattcttct ttccagtggc gaattacgta aatttcaact gactaaaacc   480
ctcctgacag ctccccgggt attgattatg gacaatcctt ttatcggttt ggatgcacct   540
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gaagacctgc acgtgcttcc gaaaatggaa agggaggctt atctggcttc attttgtgtg   720
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aatctgccgg ccattgagat tgtggcttcc ggattgcatg acagcatcgg tttgtacaaa   1140
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aagacgatga ttatggtaac ccattacgaa tcggaactcc cttctaccat caccgaccgc   1440
cttttcctga aaagaaatcg ttga                                          1464
```

```
<210> 37
<211> 1113
<212> DNA
<213> B.fragilis
```

```
<400> 37
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atgaataaaa taatagaact gttgggaaat caggctgaat attacctgaa ccacacttgc   120
aaaaccattg ataaatcact gattcacgta ccgtcaccgg atacaatcga taagatatgg   180
attgactctg accgtaacat acagactttg cgcagtttgc agacattgct ggggcatggt   240
cgtctggcaa acaccggata tgtatccatt cttccggtcg atcaggacat cgaacatacg   300
gccggagctt cgttcgctcc gaatccgatt tatttcgatc cggaaaacat tgtgaagctt   360
gccattgaag gcggttgtaa tgcagttgca tccactttcg gcaatctggg tgctgttgcc   420
cgaaaatatg cgcataagat accgtttgta gtaaaactga accataatga gttgttgtct   480
tatcccaata cttacgatca ggttctgttt ggcaccgtca aggaggcttg ggaaatgggg   540
gcagtggctg taggtgctac tatctatttc ggttccgaac agagtcgccg ccaattggtg   600
gaaatcgctg aggctttcga ttatgcgcat gaactgggta tggccaccat cctgtggtgc   660
tatctgcgta acaacgagtt caagaaagat ggtatagact atcatcgggc tgctgacctt   720
accggacaag ccaaccgtct gggagttacc atcaaggccg atatcgtaaa acagaaattg   780
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```
ccgactaaca atggtggttt caaagcgatt catttcggaa agacggatga aagaatgtat        840
accgagctga ctacggacca tccgatcgat ctttgccgct atcaggtggc caatggatat        900
atgggacgtg tcgggctgat caactccggt ggagagtcac atggagcgtc cgacctgaag        960
gatgctgtcg ttacggcagt agtaaacaaa cgtgccggcg gtatgggatt gatcagcgga       1020
cgtaaagctt ccagaaacc catgaacgaa ggagtggagt tacttcacgc cattcaggat       1080
gtctatctgg atgcgtctgt caccattgcc tga                                    1113
```

<210> 38
<211> 747
<212> DNA
<213> B.fragilis

<400> 38
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gaactactga aagagaatgg atttaacttc gataaagctt atacgtcata ccttaaacga        180
gcggtgaaaa cgctgaattg cgtactcgac cggatggatc aggactggat tccggtagag        240
aaaagctggc gcctgaatga aaaacattac ggcgatctgc aaggactgaa caaaagcgaa        300
acagccgcta aatacgggga tgaacaggtg cttatctggc gcaggagtta tgatatagct        360
cccaatgccc tgtcggaaga cgatccgaga aatccccgct ttgagaatcg ttatcaggaa        420
gtacccgatg cggaacttcc ccggacagaa tctctgaaag ataccatcga acgtatcatg        480
ccttattgga agtgtatcat cttcccgaat ctgaaaacgg ctgatgaaat tctggttgtt        540
gcccacggaa atagtttgcg cggcatcatc aagcacttga agcacatctc cgatgaagag        600
atcgtaaaac tgaatctgcc gactgccgtc ccttacgtat ttgagttcag tgacgaactg        660
aatctggaaa aagactattt cctgggtgat cccgaagaaa tccgtaagtt gatggaagcg        720
gttgccaacc agggaaagaa aaaataa                                            747
```

<210> 39
<211> 2307
<212> DNA
<213> B.fragilis

<400> 39
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aagccactat ctgccggaga acgcttaagc aacagagctc tgaaccacaa acatccattt         60
ggttcttccc gtttcatttg tgaatataat gaagtatatc ttactttgca cacacaatgc        120
atatttcata acatcaacaa caataccatg aaaaaattac ttgcaacatt actgattctt        180
gtagcttgta ttcatgtcaa tgcacaagag tccatacaga ttcgcatctc gacagatcgg        240
acggacctta tcctggaagt tgctccggac ggacgtctgt atcaatctta tctgggtgac        300
agactactga acgaacaaga cctgaaaaac ctttccggct cctcacgagg atgggaagtc        360
tatccgggtt cgggtggaga agattatttc gaaccggctg tagccattac gaacaacgat        420
ggcaatctca gcacgatcct gcgttatgta tcttcggaac agaaagcagt ggaaggtgga        480
acagaaacca tcatccggat gaaagatgac caatatccgg tggacgtcac actgcactat        540
gtagcctatc ctaaacaaaa tgtcatcaaa acatggagcg agatcaagca tcaacaaaag        600
aagccggtcg tgttatggcg ttatgcttcg acaatgcttt acttctcaaa ccaaaaatat        660
tatctcaccg aattcagcag tgactgggct aaagaggtgc agatgagtac acagcaattg        720
caacccggca aaaagattct cgatacgaag ttaggtagcc gtgctgccat gcacatgcaa        780
ccttttttg aactcggact ggaacagccc gctcaggagc atcagggaca agtagtattg        840
ggcaccatcg gatggacagg caactaccag tttactttcg aagtggacaa tgaaggcgac        900
ttacgaatca tccctgctat caatccatac gcctcggact atcaattgaa agcaaacgaa        960
acatttacca ccccggagtt tatctttacg ttgagtaaca cggtacggg tgaagccagc       1020
cgtaatctgc acaattgggc acgcaactac caactgaaag acggcaaggg agaccgaatg       1080
actctgctta ataattggga aaatacttac ttcaccttcg atgaagaatt actgggcaaa       1140
ctgatgaaag aggccaaaca cctgggcgta gatatgttcc tgcttgacga cggatggttt       1200
ggcaacaaac atccgcgcaa cgatgaccat gccggcctgg gcgattggga agcgatgaaa       1260
agtaagcttc cggaggaat ccctgcatta gtagagaaag cgaaagaagc cggtgtcaaa       1320
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ccggaatggg ctatccatta cccgaaccgg gaaacttatt atttccgtaa tcagttggta       1440
cttgacctga gcaatcctaa agtacaagac ttcgtgtttg gtgtcgtaga taagattatg       1500
acggagaatc ccgatgtagc cttctttaaa tgggattgca acagtccgat tactaatatt       1560
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tattcgcctt acctgaaaga taaacaagga cagctctaca tcgaccacgt gcgcggtata    1620
tataatgtat tgaaacgggt aaaagagaaa tatcctaatg tgcccatgat gctttgctcc    1680
ggtggaggtg cacgttgtga ttatgaagca ctgaagtact tcaccgaatt ttggtgttcg    1740
gataataccg atccggtaga acgcttattc attcagtggg gcttctcaca gttctttccg    1800
gccaaagcga tgtgtgcaca cgtaacaagc tggaacagca aaacaagtgt gaaattccgc    1860
accgatgttg ccagtatgtg taaactcggt ttcgacatcg gactgaaaga catgaaagca    1920
gatgaactta cttattgcca ggaagcagta gccaattata aacgcttgaa acctgtcatt    1980
ctagatggtg atcaatatcg tctcgtatct ccatatgatg gcaaccacat ggcagtgatg    2040
tatactgccc ccgatgcttc gaaagccgtc ctctttacct acgacatcca tccgcgtttc    2100
ggcgagaaac tactaccggt aaagctccgg gggcttgatg cccaaaagat gtaccgggtg    2160
aaggaaatta atctgatgcc gggtcggaaa tccaatttgt cgggtaatga aaaaatcttc    2220
tccggtgact atctgatgaa aataggattg aatgcattta caacttcaca aaccaatagc    2280
cgggtaatag agttggtagc agagtaa                                       2307
```

<210> 40
<211> 1218
<212> DNA
<213> B.fragilis

<400> 40
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tcgccattag cttccgggga gataaatgat gtttggggac ataaacaagt ggctacgatt    120
gaaatggcag gctctgatag cgtttgggtc tgccacttgt ctatgttgaa ggatacggtt    180
actgtacctc ttagttattt tgtcgaggag ctggaaatgg tcaaacttga taatcgggat    240
gctgcattgg tatcttcttc caaaacaatt attggcaaac aatatatttt agtacataaa    300
atggggcatg tccctttcaa acttttact aaaagcggga cttatttgag ggatatcggt    360
tcctttggtc aaggtgcggg tgaatatggc ttagcttatg atgcacagat ggatgaggag    420
aataaccgac tttatgtgtt atgttggcag gccgaccata tcttggtatt cgatttacaa    480
ggaaatatac ttcaaccgat tcgattggcg cattggtcac ctaaaggggt atttcatgta    540
gaaacggaac gaggacgagt gcatgtttgt gctctttctt ttaatcgtga ctttgtaggt    600
gataggcatt cgcctatgat ttggacgcaa agtttggatg gcaagattat aaaagaactt    660
ccggcagggt atttggccgt gaatgattat ggaaatgaaa tcaaatctct aaataatggg    720
acggtgatgg acattggttt ctggtttgga ggccaatatc gtaacgattc attatatcac    780
tataataacc aggagtttag gcttcttccg cgttttacgc ttgattatgg aggacatgaa    840
ttgaccccac acagcttcgg agagttgccg aatcacttct ggggagaaat atcatatcct    900
gtaaggctaa gtccacattc gtcaactacc actcctccgg aatattatat ggttgataaa    960
catactttac gaggcgcttt tgttgaaata tacaatgatt tcttaggggg cattcctgct   1020
gactggttct tttcatctca tgacggatat tatgtttgga atgttgaacc tgtacgattg   1080
aagcaaatgg ttgaggatcg tttgtcttca ggtgagattg tctcggattc ggaccgaaga   1140
aagctaaccg aactgcttag gagtactaaa gaaaacgata caattatat tttctatggt   1200
cgattgaaat gtagatag                                                1218
```

<210> 41
<211> 1203
<212> DNA
<213> B.fragilis

<400> 41
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ctgatatttg ccaccccact cttctacgag ataattcatc tgagccaatg tctctttaat     60
tttctcggga ttagcatgag gcttatctat tttattaata gcaaatacga taggaacacc    120
tgctgctgct gcatgattaa tggcttcttt ggtctggggc attacatcat catcggcagc    180
tacaataata attgcgatat cggtcacctt tgcaccacgg gcacgcattg cagtaaatgc    240
ctcatgtccc ggagtatcga ggaacgtaat cttacgtcca tcttccaatg taacatgata    300
tgcaccaata tgctgtgtga tacctccggc ttcacctgca attacatttg ctttacgaat    360
gtagtcaagc aacgaagttt taccatggtc tacgtgtccc atgactgtaa caatcggagc    420
acgatgttcc agatcttccg gcgcatcttc ctcttcaaca atggcttggg ctacttctgc    480
actgacatat tcagtcttaa atccaaattc ttcagccaca agattaatcg tttctgcatc    540
cagacgctga ttgatagaaa ccatcatacc aatgctcata caagttccga taacctgatt    600
tacagatacg ttcatcatgc ttgccaattc attagcagtc acaaattctg tcagtttcag    660
```

```
taccttgctt tctgccattt cctgatcttc cagttcctgc atacggttgg acgccatgtc      720
acgtttttct ttacgatatt tggcaccttt gttcttacct ttgcttgtca gacgagccaa      780
cgtttcttta acctgctttg ctacatcttc ttcgcttact tcctgcttta ctacaggctt      840
tttgaagcgg tctttattat tgttattacg gtttctattc tgtccgccgc caccttgttg      900
atttcctcca cggttattat tcgtacgctc actgtttgga gtagggtgtg caaaaattaga     960
agcaacattg ttcacatcta ctttttcctt attattgttg atgcgattac gtttcttctt     1020
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gatttccttg atgatggctt ccttcatctg tttcttctga tcctgacgaa gcttttcctt     1140
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taa                                                                   1203


<210> 42
<211> 525
<212> DNA
<213> B.fragilis


<400> 42
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cggatcttaa atacgccctc ctcttccttc tctactggag taaccggtgc ttctgctacc      120
ggtttctctt ctttcttctc tgttttttct ggagacacca cgacttttgg ttcttctttc      180
ttgacttcct caaccacttt cttttctgtt tcaacaggct tttcaaccac caccggtttc      240
ggttcttctt tcaccggttt cggttccgaa gtagcaggag tcacagtgac ttcttctttt      300
ttcacttcga ttacaacagg cttaacctct tccgctactt tcttttcctc agcagctaca      360
ggttgtggtt ttggctcttc tttcatcggt tctttctcaa ccttccggtt cagtttatct      420
aaatcaattt ttccgacagg tttaaacttc ggacgcacat cttccggaat gaccgtctta      480
atcacatcgt cagcaacagt cttctccggt tccttcttat cataa                      525


<210> 43
<211> 1269
<212> DNA
<213> B.fragilis


<400> 43
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gaactgaaga atatcgatag aaccacgatg gtaagcgtgc tcgaagagtc gttccgcagt      120
gtgatcgcga aaatgtttgg cactgatgaa aattacgacg taattgtgaa cccggataag      180
ggtgactttg aaatatggcg taaccgtgag gtagtggcag acgaggattt gactaacccg      240
aatatgcaaa tttcgttgac tgaagcacaa aaaatcgatg cttcttacga agtgggtgaa      300
gaagtaaccg atgaagtgat tttcgctaag ttcggtcgcc gtgctatttt gaatcttcgt      360
cagacactgg cttctaaaat tcttgagctt gaaaaggaca gtatttataa taaatacatt      420
gataaagtag gtactatcat caacgcagaa gtataccaga tctggaaaaa agagatgttg      480
ttgcttgacg atgaaggaaa cgagttattg ttgccgaaaa cagagcagat accaagcgat      540
ttttatcgta aaggagaaac tgcccgtgca gtggtggcac gcgtggacaa caaaaacaac      600
aatccgaaaa ttatcctctc gcgtacttct ccggttttcc tgcagcgctt gttcgagatg      660
gaagtacctg aaataaacga tggcctgatt accatcaaaa agattgcccg tattcccggt      720
gaacgtgcca agattgcggt agaatcttat gatgacagaa ttgaccctgt aggagcctgc      780
gtaggtgtaa agggaagtcg tattcatggc atcgtacgtg aacttcgcaa tgaaaacatt      840
gatgtgatta attatacatc taatatttca ttgtttatcc agcgtgcttt aagcccggct      900
aagatttctt ctattcgtct gaatgaagaa gaacgtaaag cagaagtatt cttgaaaccg      960
gaagaagtat cgttggctat tggtaaaggc ggttttgaata ttaaactggc cagtatgttg     1020
actgagtaca ccattgatgt gttccgtgag ttggatgaaa acgcgcagga tgaagatatt     1080
tatttggacg agttcagaga tgaaatcgac ggatgggtga tcgatgctat caaggctatt     1140
ggcattgata cggctaagtc tgtattgaat gcacctcgcg aaatgctgat tgaaaaaacg     1200
gatcttgaag aagaaacggt ggacgaggta ttacgcattt tgaaatcgga gtttgaagat     1260
aatgaataa                                                             1269


<210> 44
<211> 855
<212> DNA
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<213> B.fragilis

<400> 44
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cttccctttt actattacgc agacggacgg aaattccata ttacaatggt tggacgaggt    60
tatttttgga aaagaataga taatgaaata attgataaga tcatgttaga gataaaagac   120
ctgcatgcca gcattaacgg caaagagata ttgaaaggca ttaacctgac ggtgaagccg   180
ggcgaagtac atgccattat gggacctaac ggttcgggta aaagtacgct ttcgtctgtt   240
ctggtaggta atcctgcttt cgaagtgacg aaaggaagca tcacgttcta tggtaaaaat   300
cttttggaat tgagccctga agatcgcagt cacgaaggta tttttcttag ttttcagtat   360
ccggtggaga tcccgggcgt gagcatggtg aactttatgc gtgctgctgt caatgaacag   420
cgtaagtaca aaggattacc cgctttgaca gccagtgagt tcttgaaatt gatgcgtgaa   480
aagcgtgcag tggtcgagtt ggataataaa ttggccaatc gttcggtaaa tgaaggtttc   540
tcgggtggag agaaaaaacg gaatgagatt tttcagatgg ctatgctcga acccgtctc    600
agtatcttag acgagactga ttccggactc gatatcgatg cgcttcgtat tgtagccgaa   660
ggagtaaata aactgaaaac tcccgatacc agttgtattg tcatcaccca ctatcagcgt   720
ctgctggact atataaagcc ggacattgta catgttcttt acaaaggacg tattgtaaag   780
actgccggtc cggaactcgc tcttgagttg gaagagaagg gatatgattg gattaagaag   840
gaattaggag aatga                                                    855
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<210> 45
<211> 195
<212> DNA
<213> B.fragilis

<400> 45
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ttgtggggct attggcagca aaagcctttg tacacctcac tggctgtgaa gttatgccct    60
acggtgaccg actccatgac tgtggcgcag atactggcat ttatcattat ctggatcgct   120
gtggccgcta atctttacat tggtggcttc agtattaacc aaggcattgg aggcggtttc   180
acttggctgg cctga                                                    195
```

<210> 46
<211> 348
<212> DNA
<213> B.fragilis

<400> 46
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aaacgaataa ccacttatta tggcattgtg tccggagaaa ctattatagg tgccaatgtc   120
ttccgtgact tttttgccag tattcgtgat atagtaggcg gacgctccgg ttcatacgaa   180
gaagtgcttc gtgaggcaaa agatactgct ttgaaagaaa tgtctgaaca ggctcgccaa   240
atgggcgcta atgctgtgat cggagttgat ttggattacg aaacagttgg gggaagtggc   300
agtatgttga tggtaactgc tagtgggacg gctgtgttct tggaataa                348
```

<210> 47
<211> 1662
<212> DNA
<213> B.fragilis

<400> 47
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attagcctgt atataccttac caccggacag ggatatacag gctattttac cttacaaaaa    60
caacacctta tgaaaaagaa gaaagttact acttattgct gcctcctgtt attggcaagc   120
ttttttcacaa ctgtcacggc acaaaacaca aatactccca tgatgggggtg gagttcatgg   180
aacaccttcc gagtacatat taatgaagaa ctaattaaag agacagctga tgccatggtc   240
aaccggggtc tgaaggatgt aggctatgga tatgtgaaca tagacgacgg atactttgga   300
ggacgaaatt cggaaggacg tcttttttgcc aataagaaaa aattcccgaa tgggatgaga   360
gtcctgtccg actatattca ttcaaaggga ttgaaagccg gtatatattc tgatgcgggc   420
agcaacactt gtggctccat ctatgacgca gatacactcg gtatcggtgt agggctttgg   480
aaacacgatg atatagactg ccaaaccttc ctcaaagact ggggatatga tttcattaaa   540
atagactggt gtggcggtga agcaaccgga caaagtgagc agcaacgtta tacggatatc   600
```

```
tacaaagcga tcagacggac aggacggaca gatgttcgat ataatatatg ccgttggcag    660
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ccacgattca caacaatcga ccgaatcatt gaaagaaatc tctacttagc accttacgca    780
agcccggggc actataatga catggatatg cttgaagtag gaagagggct cacggaagac    840
gaagaaaaaa ctcattttgg aatatggtct atcttgtcct ccccgttaat gatcggatgc    900
gatcttcgta caattcctga aaaaacttta tcgatcatta ccaataagga agtgatcgca    960
ttaaatcagg attcattagg tctgcaggct gaagccattg aacggggaaa agactatctg   1020
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gtacgagtga gagatctatg gaaccatcaa gaaatgggaa cattcaccga ttactatgaa   1200
acgctagttc ctgcacatgg aacagcttta ataagacttg aaggtagcaa acgtcacgac   1260
cggacatgtt atgaagctga atatgctttc atgcaagaat ttctgccaga caacaaacag   1320
gcagctcatt ttacaccaaa atcaggagcc tcaggagaat atattatgaa aaatcttgga   1380
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acagaatata aacagtctaa cctttattcc ggtacatggg atcaagcagc tacaacaact   1560
atcaaggtta aacttcgcaa aggctataac acgatacgtc tgtataattc gtacgggtgg   1620
gcacccgata ttgataaaat ggaaatcatc aaaggtcgtt aa                      1662
```

<210> 48
<211> 1350
<212> DNA
<213> B.fragilis

<400> 48
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tatatcctac catttatctt agtgacctct tgttttgctc tatggggggtt tgctaacgat    120
attaccaatc caatggtgaa ggctttctcg aaaatattcc gtatgagcgt cactgatgga    180
gcactagtac aagtcgcttt ttacgggggga tactttgcaa tggcctttcc tgctgcaatg    240
tttattcgca aatactctta taaagccggt atcctgttgg gactggggct atatgctttg    300
ggtgccttgc tgttttttccc agcaaagatg acaggcgatt attacccttt tctgctcgct    360
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tcgatgggta cagaagagac ggcgacccga cgattgaatc tggcgcagtc gtttaatccg    480
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atggatacgg tagaacgcag ccaattgtct ccggcagagt ttgaagtatt gaaagagtcg    600
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gtcactaatg tttcccacga tttatggcca ttgctcttcg tggtttgggt gatgatgcca   1140
aatttggggg ctgccggttt gattatggca attctgggag ctctgtgtt gccaccatta   1200
caggcttgta ttattgacca acatacattg ttgggtatgc ctgctgtaaa cttgtctttc   1260
atacttcctt ttatctgttt cgtagtgatt atcatttatg gacatcgtac gtgtgcacgt   1320
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```

<210> 49
<211> 1722
<212> DNA
<213> B.fragilis

<400> 49
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accaaaggat tgaattttaa agcactggtt tcttttaaaa actggtcgaa gacgactgtc    120
aatcgctcct tttcaccttta cttttatgaa ttacagaatc ctcaggagca agaagacgga    180
agctatcttt atgattataa ctctatcagt aagggacgta ccgctcttga gacatcgact    240
```

```
tccactactg gcgaccgtct gatgaacctg caggctacac tgaactatca gcgcatgttc    300
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aatcctgaca ataactatta caatacattg ccggaacgta atcaggggct ggccggacgt    420
gttacctatg cttatgacgg acgctatttg gctgaattca atttcggcta caatggtagt    480
gagaacttcg aaaaaggaag ccgttacgga ttcttccctt cactcgctgt cggctatctt    540
atctccaacg agaaattttt cgaaccattg acaaaagtta tctccaactt aaaaatacgc    600
gcttcgtacg gattggtagg taatgcggat atcggctcca accgtttccc ctatcttact    660
aaagtagatt tgggtggagc cggatttgta ttcggtgacc agtggcaaac ctcatctaac    720
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aatgtaggat tcgacctggg attattcaac aaattaagcc tcaacgtaga tttctttaga    840
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caagtaggac gcccctgaa tcagtataaa ggctatattg cattaggact cttcaaagat   1140
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attaaatatg cagacctcaa taatgacgga aagatcgacg gaaacgatca aacttacatt   1260
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catcctttcg gtggagaatc gtatggtgtc atgcaatttg ttgccgataa tcattggaca   1440
gaggcaaacc cgaaccccga agcaatgtat ccgagactga caaacgggaa aaacaacaat   1500
aataacccca actctactta ctggctgaga gatggttcgt atatccgact taaaaacgtg   1560
gaattaggat actcttataa attttttacgt gcctatatca gcggacaaaa cctgctgaca   1620
ttctctaaat ttaaattatg ggatccggag ctctatacct caaacggatt aaaatatccg   1680
acacaaatca tgggttccat cggtttacag ttcactttt aa                       1722
```

```
<210> 50
<211> 1668
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (1640)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 50
aatcaatgta aatgtatgaa aaagaaagca attccttgtc ataaggcagg gaggattacg     60
tccttttttt tattaattag tattttttta cttataccga gtatcactac tccggtttat    120
gctgtagaaa cttatacccca gcaaactgtt tttacgcttc acgcaactaa taaaacagta    180
aaagaagtgt ttgaatacat cgaaaaaaac agtgaatttg tcgttttgta ttcaaaagat    240
cttttacctg tactgcagaa gaaagtgtct gtttcgatag ataaacagaa tgtagaatcg    300
attctgaata tcttgtctaa agaagcggga ttgaagtaca acatcaacga ccgtcagatc    360
acaattacca aagttacggc agaagcacct caacaggaaa aaaaatcaa aatcaccggt    420
caagttcttg acgaaaacgg agaagggatt ccgggagcaa atatcgtaat aaaaggcaat    480
agtacattgg gaacagtaac caatgtcgaa gggaacttta cattaatggc tccggaaaat    540
agcacattag tagcctcctt tatcggatat accccctgttg aaattccgct aaaagggaaa    600
aagatagttg ttttcaaatt ggtacctgac gcccagagtc tggaagaagt agtggtagta    660
ggattcggaa cacagaaaaa agccagtgtt gtaggtgctg tacaatccat caaaccggct    720
gaacttcgag taccttccag taacctgagt acatcatttg ccggacgtat agcaggcgtg    780
atttctatgc aacgcaccgg tgagccgggt gccgatggag caaacttctg gatacgcggt    840
gccgcaacct tcagcggaac gactgatcct ctgatcttca tcgatggtgt cgaagtttcg    900
gcaggagata tgaacgctat tccctcggaa gctatcgaaa acttctcaat attgaaagat    960
gcctcggcta cagccctcta cggagcacgc ggtgccaatg gtgtcatcct gatcactacc   1020
cgaaccggta aagatcttga aaaagcacgc atcaacgtac gcatcgataa tacatttacc   1080
gcaccgacac gtacactcaa actggcagat gcagtaacag ccatgaaatt gagaaatgaa   1140
gccattctga cccgtaaccc ggatggtaca ccggctttct cagatgataa aattcaagga   1200
acgcttgaag gcagaaatca gtatgtatat cccaacgttg attggttcga ctatatgttt   1260
aaagactact ccatgaacca atcagccaac ctgaatgtaa tgggtggtac aaagaaagta   1320
```

```
gactatttca tcagcgcctc catcaataat gataatggta tgctgaaaaa agatccgaat    1380
aacacattcg acaacaatat acagaatctt cgctactcgt tccaaagtaa cgtgggagca    1440
tggttgacat caagtaccaa agtaaatgtg agaatcaact cgcaaatagt caattacaat    1500
ggtccgtcaa ccagtatgga cgatttgtat aaatacgtaa tggaagctcc gtcaatgtat    1560
tttgcacctg tatatccgaa tatcaaccgt gaagatcaca ctatattcgg aaacaaatca    1620
ggtggtccta tcggttccgn aggattcagt atttatcgca acccttaa               1668
```

<210> 51
<211> 411
<212> DNA
<213> B.fragilis

<400> 51
```
atattaagaa aagaagttta tattttatat ttttgcagcg cacatatggt aaccattact    60
ctatatatga acaacaacat agaatatatc agcaagataa agaaaggaga agagacttct    120
ttccgtcatt ttgttaatag ctattcgaaa gacttgttct actatgcaca gtgtttcgta    180
cgaagcaaag aaaccgctga agaagtagtc agcgacgtct ttctggatgt atggagacac    240
cgcgaagaaa tagatgaaat caagaatata aaagcttggt tgctcacatt aactcataac    300
aaagccatct tctatctgag aaaagcggaa aattcaagtg aaattgcttc atgggaagaa    360
atagatgatt ttcaaataat cggaaatctg caactcccca tgaagagatg a            411
```

<210> 52
<211> 1851
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (920)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 52
```
ataattatga aactaaaaaa tataattgta gctttactaa tcggagctag cttacactct    60
tgtgattatc tggacattgt acccgatgac acccctattt tggctgatgc gttcaagaac    120
gaacagactg ccgagaactt tgtcttcgcc tgctattctt tcattcccaa ttatctgaac    180
ttccgtcaga acttcagttg gtgcacaact ccggaaactg tcggatctgc ccactggacc    240
actacttggt tcacctttat gagaatgcaa caaggattgt acaattctgc tgatccaatc    300
attgatgtgt ggcaaagttc atacaacggt atccgccaat gttatacgtt cttggataat    360
attgatgatg taaagccatc acaaatctca gaggcagacc tcgcagccaa gaaagtactt    420
tggaaaggtg aagtaaaatt tctgattgcc tactaccact acctgctatt acagaactac    480
ggtcctatag tcatactgga cgaagcaatc cctcttaatg cacccaaaga agaacttttc    540
aagccgcgtg taccctatga tgaatgcgtt agccgaattg ctcaaatgtt cgataatgcc    600
tctgccgacc tgcctatgac agtgaaagct tccaactacg gtcgtgctac aaaagtcatt    660
gcacaagcac taaaggcaag aatgtacttg tacgcagcca gcccacagtt caatgggaat    720
gctgatatgt ataagaattt caagaacaag gacggacagt gctcatgaa cctgacttat     780
gacaagaata aatggaaaac tgccatggac gaatgtaaaa aggcaatcga catggcacat    840
caagccggag cagaattgta taagtataca aagaaaggta atctgccgga attcaaccaa    900
gccattgcca atgcacgtan acctgttgta gacgcatgga ataaagaact gatctgggga    960
tatagtggct ggaaagaaac atgggccgat ggaaactcta ttcaaacaca cgtaattccc    1020
aaaggtatca gtacttcctc gggagcacct tatggagctt taggtgcaac ggctttcagt    1080
gcggacatgt atctgaccaa gaacggactt ccgatagatg aagatccaga gtttgattat    1140
gcacatcgtt tcacagtagc cgaagggggat tcggtagcag tgctccatcg caaccgtgaa    1200
ccacgtttct atggttctat cggcttcaac cgcgggggact acctgatcaa cggagacacc    1260
attaacctca aaatgcgctt caaagagcaa aatggaacac gtgatgcggg aagtgaccaa    1320
ttatatggat cgtatgctat cgccaaactg gctcatccag aaacttttgt tagtggtacc    1380
agcaactctc tggtagcttt cccttccct atcatccgct taggagaatt gtatttggac     1440
tatgcagagg cttactttga atacaatgga acactggaag gagatgcact tacttacttc    1500
aacctgatcc gccagagagc cggtattcct aatgtagaag tttcctacaa aggacttccg    1560
tccggagaca aacttcgtga ggtaattcat cgtgaaagaa ccatagagct gatgttcgaa    1620
```

```
ggacatatgt catacgacta tcgccgttgg ctgattgccc tgaaagaatg gagcggtatg   1680
gaaaatggta tgatcggatt gaactcttac ggtacaacca acgaagagta ttataaaaat   1740
gcacgtttgg atgctcaacc attcatcttc agggatgaac agtatttgag tccaatcaaa   1800
caggattacc tgaatgtaaa ttcaaatctg gtccagaatc cgggttggta a            1851
```

```
<210> 53
<211> 339
<212> DNA
<213> B.fragilis
```

```
<400> 53
acgataaaga aagaaaaagg ttgcaggaat ccttcattta ttatctattt atacggatcg    60
gtcgttggaa gtaatactgt acggtacttg ctccgccttc ccttggttga cggaggaaaa   120
acagacctcc tccccaaaaa agttaaagac agagccctaa agtcattcaa cacatttcag   180
caagcccta tcaaacataa aaaaatgtcg caaaagcaac aactttcacg acacttcaat    240
atctgtcaga atacacatgc ctcagaacat cttactgacc cgttcgatac cagctacaag   300
agcatcaact tcctcttttg tattatacac ggcaaatga                          339
```

```
<210> 54
<211> 1134
<212> DNA
<213> B.fragilis
```

```
<400> 54
aagcagcacg aaagtaatat tgagaatcgg atgcggtgtt tgacgattct tctgggcaac    60
tgttttcttc tgcttgtgtc attagcctct tgcgggaaag tgtcattagc ggaagaagca   120
gtgttttcta taccggtgga tacgacattt atgaggcttc gtcaatggga gtggtattgt   180
cagaaacggg ctgacagttg tctgacagag aataattatc agggagcttt atcttggctg   240
gattccgctc gtatccaagt ggaacattac ggacgtcctt attatatatt ggcacgcggg   300
gacgtatatt attccatcca tcaatatgat tctgcccgtc gttattttag tatggcagtc   360
cattccattc atccacatat tgctatcgaa gcttggagga aacttgcaga actggaactt   420
atggaaggaa atgagaagca agggttctat tctacgcaga aggcagatgc acttttccgg   480
gtggagatag gccatgtgca gagtgataac agtgaagctc tatatcagga agagaggttg   540
aaaaacgagt taaaccaatt gaagattgcc aaacagaata gggaaattgc catgttaact   600
ttgagccttt gtctgattat actgattgct ttgtttattt tctaccggca aaataagata   660
aagcgtgaaa aagagcgtct gcttcttgaa gagaaagcca agttggagca agagaaccaa   720
atactgaaac aaactgaaga gttaagtgct ttgagagaaa aagaggcggt tttgcgagag   780
tctttgttcc gtaaggtcga tgttttgcgt aaaataccct ccctcaatga agaagaacag   840
gagagtggtg aacatcgcat agctttgtcg gaaagggagt gggaggaaat tcgtcagaca   900
gtggataatg cttatgatgg gttttcacaa cggttgcttg cacgctttcc tttgttgacc   960
ttaaaagata tttatttctg ttgtctggtg aagatcaatg tcagtataaa ggacctttcc  1020
gatatttatt gtattagtcg tacctcggtt agtaaaaaga aatttcgcat caagcgagag  1080
aagcttggag cagaggattc ggactcttta gatgactttt tacgtggttt ttag        1134
```

```
<210> 55
<211> 471
<212> DNA
<213> B.fragilis
```

```
<220>
<221> unsure
<222> (228)
<223> Identity of nucleotide sequences at the above locations are unknown.
```

```
<400> 55
tcaatgatag aaaaaagaac tgtttgtcag attgttgaag aatggctgga ggataaagac    60
tattttctgg tagaagtgac cgtcagccct gatgacaaga ttgtggtcga aattgaccat   120
gcagaaggtg tttggattga agactgtgtg gagttgagtc gcttcattga gtcgaaactg   180
aaccgtgaag aggaagatta tgagctggaa gtacgttctg ccggaatncg acagccattt   240
```

```
aaagtattgc aacagtacta taaccacatc ggcctggagg tggaagtgct gactaaaggc    300
ggacgcaaac tgagcggggt cttgaaagat gctgatgaag aaaagtttgt tgtgaccgta    360
caaaagaaag taaaacccga aggagccaaa cgtcctcaat tggtagaaga ggatgaaacc    420
ttcacctatg atgatataaa atatactaaa tacttaatta gttttaaata a             471
```

<210> 56
<211> 1566
<212> DNA
<213> B.fragilis

<400> 56
```
ccaaacaaag aaggagcagt ccttgttata ttatcttatg gaaagctttg cggggatctt     60
ctttcctgca gcaaaagagg ttacacaaca atatatattc aaataaaaat gatgcaacaa    120
gaagaaccca ataaatatgt aaaagaactc acgcaggaga agtataaata cggcttcact    180
acggaggtac atacagatat catagagaag ggactcaatg aagacgtggt acgtttgatc    240
tcgtctaaaa agaacgagcc ggagtggttg ctggagttcc gtctgaaagc ttatcgtcat    300
tggttaacgc tggagatgcc tacttgggca catttgcgta taccggaaat tgactatcag    360
gcaatctcat attatgccga tcctacgaaa aagaaggagg cccgaagag tatggatgaa     420
gttgatccgg aattgataaa aacattcaat aaactcggca ttccactgga ggagcagatg    480
gcattgagtg gtatggctgt ggatgcagtg atggactctg tgtcagtgaa aacgaccttt    540
aaggaaacac tgatggagaa aggtattatt ttttgctcat tcagtgaagc tgtgcgtgaa    600
catcccgact tggtgaaaaa gtatctcgga tctgttgttg ggtatagaga caacttcttc    660
gcggcattaa actcggctgt attctcagac ggttcttttg tctatatccc caagggggta    720
cgttgtccta tggaactctc tacttatttc cgtattaatg ctgccaatac cggtcagttt    780
gaacgtacat tgattgtggc tgatgacgat agctatgttt cctatctgga ggggtgtaca    840
gctccaatga gagatgagaa tcaattacac gctgctattg tcgaaatcat ggtacatgat    900
cgtgcggaag tgaaatatag caccgtgcag aattggtatc cgggcgatgc cgaaggcaaa    960
ggtggagttt ataattttgt gacaaaacgt ggcaattgca aaggagtaga cagtaaactt   1020
tcatggaccc aggttgagac aggttcggct attacatgga aatatccgtc ttgtattctt   1080
tccggggata attctactgc agagttttat tctgtagctg tgacgaataa ttatcagcag   1140
gcagatacag gtactaaaat gattcattta ggtaagaaca cccgtagtac gattgtcagc   1200
aagggtatat ctgccgggaa gagcgagaac tcttaccgtg ggttggtccg tgtagccgaa   1260
aaggctgata atgcccgtaa ttatagccag tgtgactcat tgctgttggg tgataagtgt   1320
ggtgcacata cttttcccta catggatatc cataatgaaa cggcagttgt ggagcatgaa   1380
gcgactacca gtaagattag tgaggatcag atatttatt gtaatcagcg tggtatttct    1440
acagaagatg ccattggatt gatcgtaaac ggctatgcta aggaggtact taataaactt   1500
ccaatggaat ttgccgtaga agctcagaaa ctacttacga tctctcttga aggcagtgta   1560
ggataa                                                             1566
```

<210> 57
<211> 246
<212> DNA
<213> B.fragilis

<400> 57
```
ccaaggcatt ggaggcggtt tcacttggct ggcctgaatc gcatgcttga agccgggctc     60
ggagctttaa aatatctttt attggtgagc ttggttatat gtgtcattca gtttatagac    120
tccgatagtc agttgattag ccaaacaaag aaggagcagt ccttgttata ttatcttatg    180
gaaagctttg cggggatctt ctttcctgca gcaaaagagg ttacacaaca atatatattc    240
aaataa                                                               246
```

<210> 58
<211> 1341
<212> DNA
<213> B.fragilis

<400> 58
```
cttttttacgt ggtttttagt tctcggaaac ttgtttgtcc atgctaattt aagaaatatt     60
ttatataata tgttgatata tagtgtggta tcgtatttct ttttgaagta ctttgtctat    120
```

```
atcccttttt gttttcctc tgcccgatgg ttaattttgc aatatcaaaa ctttaaaaat    180
gtacgtgata tgttgaatcg actgaactat ttcattatgt tggcagggct acttgtttta    240
gtagcatgtt cgtctaattc cggaaaacag gtagaggttg caaatactcc ttttgtttac    300
gatggattaa aagagtatcc ggtaaaagag ttgaaactgt ccgatctggc agttagtgat    360
tatgtgttat taaaagacga tgaaaattca ttgttgggta ggttaccgac aaatccctgt    420
atgcaggtca ctgaagaccg gattttatatt caggatgaag agcaacaggc tatatttatt    480
tttgaccgtc agggaaatcc attattgcaa atgcgtcata aaggaggtgg tcctcaggaa    540
tgggcgtctc tgaactcttt ctatgtggac agccctaata aagaaattat agtgttggac    600
tgggctaaaa agtttatagt ttatgatttg aatgggaaat ttaaacgaag cttcccaacg    660
cccggttgct cttggaagtt tgctaatttg aatgatgagg ccgtactgat atattgtcct    720
tttacgaatc gtaataacgg agaggcagtt tgtatccttt ctaaaaaaga tggcaaaaag    780
ttgtatgtgt gtcctattac gatagataat tttgtgtggg atagtgaggg acgtattggc    840
tatgaaccat tgaagccagc ttatggtggg atttttatttt cagatttatc attgaaaggc    900
gtgtatttta ttgatgctga aacatatgaa gtaaaacagg ttattgatga agtgacagaa    960
tataaatttg aaaatgcaga gttcgttaag ctacatccgg cgatcgatgc taaagactat   1020
actttgtata ctacgctcgg tacgaaatgg ttgactccag atatgccaat gaactattat   1080
tattttgata agaaggagca aaaaatgtat actttgaaaa atgaaaccgg atgggctgtt   1140
ttaaaagata tctgcaatgt acagagaacc cgtacaacga atactccagg tatcggcatt   1200
ggttattatt ggccttctac tatgaaagga gagtcgatgc aagctgaaaa agagcagttt   1260
gactctcgtt tccgggcaat aatggactct atacctgaag aaggtaaccc tgtattacaa    1320
attatgaact tcaataaatg a                                              1341


<210> 59
<211> 270
<212> DNA
<213> B.fragilis


<400> 59
ttacaactcc gtgtctccgt ttttgtttta catagaatga cgaccataga tattatcata     60
ctgattgctc ttggagccgg tgttattgtc ggatttatga agggctttat ccggcagctt    120
gcttccattc tcggattaat tgtggggcta ttggcagcaa aagcctttgt acacctcact    180
ggctgtgaag ttatgcccta cggtgaccga ctccatgact gtggcgcaga tactggcatt    240
tatcattatc tggatcgctg tggccgctaa                                     270


<210> 60
<211> 1371
<212> DNA
<213> B.fragilis


<400> 60
gaaggaatta ggagaatgag tttaattatg aatgcagaac agcaatatat agatctcttt     60
tctcagtgtg aggcgatgat ctgtcgtcat agcgctgagg cgttgaatgc cccccgggca    120
acagcttttg ctgatttcga acgtcagggg tttcctacac ggaaacaaga gaaatacaaa    180
tatacggatg tcagtaaatt ctttgagccg gattatgggt tgaacttgaa tcggctgccc    240
attccggtga acccttatga agtgtttaaa tgtgatgttc cgaacatgag cacttcattg    300
tttttgtag tgaacgatgc attctacaat caggtgcttc ctaagtccgg attgcctgaa    360
ggagttatct tcggtagttt gagaaatatg gctgaacagc atccggaact tgtgaagaag    420
tattatggta agttggctga tacttcgaaa gatgcggtta cggcttttaa tacagctttt    480
gcacaggatg gagtattgat gtatgttccg aagaatgtga tcgtcgatag acctattcaa    540
ctggtcaata tacttcgtgc ggatgttaat ttcatggtaa accgccgtgt gttgattatc    600
cttgaagaag gggctcaggc ccgtttgctt atttgcgatc atgcaatgga taatgtaaac    660
ttcttggcta ctcaagttat tgaagtgttt gcagaagaga actccgtttt cgatctttat    720
gaattggaag agactcatac cagtacagtg cgtttcagta atttgtatgt gaaacaggga    780
gcaaacagca atgtattgct taatggaatg acacttcata acgggacaac cgtaatacg     840
acagaagtta cccttgccgg tgaaggtgcc gagatcaatc tttgtggtat ggccattgct    900
gataaaaacc aacacgtgga caataatacc tcgatagatc atgccgtgcc gaattgtacc    960
agcaatgagt tgtttaaata tgttcttgac gatcagtctg tgggagcttt tgccggtttg   1020
gtactggtac gtcctgatgc gcaacatacc agttctcagc agacaaaccg taacctctgt   1080
gctactcgtg atgcccgtat gtatactcag ccgcaactgg agatatatgc cgacgatgta   1140
```

```
aaatgctctc atggagctac tgtaggtcaa ctggatgaaa acgctctttt ctatatgcgt    1200
gctcgtggta tcgccgaaaa ggaggcccgt ctgttgctga tgtttgcatt tgtcaacgag    1260
gtgattgata ccattcgtct gaaggcgttg aaagatcgtc tgcatttgtt ggttgaaaaa    1320
cgtttccgcg gtgaactgaa taagtgccag ggatgttcta tttgcaaata a             1371
```

<210> 61
<211> 762
<212> DNA
<213> B.fragilis

<400> 61
```
aggcagtgta ggataatgaa gacgaaacgt gttggttggc tattgatatt cctgtcctat     60
gttggtgtag tactggcaca aaaccttgac gatcaagaaa ggaggtgggc gatcagtggc    120
tcttggggag gaaattggcc gatagtcaca aagaatacac tttcgggaaa agctgtttct    180
gcaggacata tacatacttt aatgttggag tattatattc cttatacccg tttctccctg    240
aaaggaggat atacaggtga agaaataggt ttgaatccag gtatttctgc ctcaatgagt    300
aatctggaaa taggagggcg gtattatttc ttaccacaac ggtttgcaat ccaaccttat    360
gggggacttt ctactggatg gaacctctct ccacgaaggc aggaggggat gggcagtagc    420
agttattacg atccttcaag gcaagagttt cgtaaagatt acgattatcg ataccgaatt    480
aaagaaccat tattcacagt ttctcctgtg gtgggagctg atatatattt tctttcttgt    540
cttgctctca ccttggaata taatttccgg atgggcattg ccggaaagat aagtggagag    600
atagagaaga ccaattctcg tggaaccgga tttgtacgta gcaatgggat gcggcagacc    660
gtaagtgtag gggtaaaggt taacttccct tttactatta cgcagacgga cggaaattcc    720
atattacaat ggttggacga ggttattttt ggaaaagaat ag                       762
```

<210> 62
<211> 879
<212> DNA
<213> B.fragilis

<400> 62
```
gaagacggtg gcggatcttc tatggatacg gcaaaggcga ttggtattat taccaataac     60
ccggaattca gtgatgtcgt ttcattggag ggagtggcag ataccaagaa gaaatctgtt    120
cccatcatcg cgttgcctac tactgcagga actgcggcag aggtgactat caactatgtg    180
ataacggatg aaaagaacca gaagaagatg gtttgtgtag atcctaatga tattccgtct    240
attgcgatag tggatgctga gttgatgtac acacttccta aaagtctgac tgcagctacg    300
ggactcgacg cactgactca tgctattgaa ggtttaataa ccaaaggggc atgggagatg    360
agtgatatgt tcgaaattaa agctattgaa atgatcaatc gttatcttgt gactgccgtt    420
gaagaaccat cgaatgcaga ggcacgtaac ggtatggcag tggctcaata tattgcaggt    480
atggcttttt cgaatgtagg tttgggagtt gtgcatggta tggcacatcc gttgggagct    540
attttcgata ttcctcatgg tgtggccaat gctctattat gcccattat tatggagttc     600
aatgctcctg cagctcttga caaatatgtt gagatagcta aagcgatgaa tgtgtattct    660
actgacatga ctaaagaaaa ggcggcagaa gcagcagtcg aagctgtaaa aacattatct    720
ttgagggtca atattccgca cacttgtcg gacttgggta ttcaggaaag tgatcttgac     780
cgtctggcca cagcagcgtt tgctgatgta tgtacgccgg gcaatccacg ggaagtaaca    840
aaagaaatta ttcttgattt atataagaaa gcattatga                          879
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<210> 63
<211> 648
<212> DNA
<213> B.fragilis

<400> 63
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gcgcttgttt ccggaacagg ttcttgggtg ccgaatttgc agaaagagaa agtatccatt    180
tgtaatattg ctacgggtac gcctcaaaac ggtgtgaaac cttccatgga aagtaccttt    240
catctgggga ttcttcgtga gcgtccggat gtaaatgtcg ttttgcattt tcagtcggaa    300
tatgctacgg ctgtttcttg tatgaaaaat aaaccatcta acttcaatgt aactgcggag    360
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atcccttgtc atgtacgtaa agagattcct attattcctt actaccgtcc cggttctccg    420
gcgcttgcca aggctgttgt ggaagcgatg aaagaacata attctgtatt gctgactaat    480
catgggcagg tggtatgtgg caaggacttt gatcaggtat acgaacgtgc tactttcttt    540
gagatggctt gccgtatcat agttcaatcc ggaggggact attcggtctt gacgccggaa    600
gagattgatg acttggaggt atatgtattg ggaaagaaaa caaaatag                 648


<210> 64
<211> 1167
<212> DNA
<213> B.fragilis


<400> 64
tgtaatccta ttaaaataat gagaaagaat aagtttaaat catttgcttc acgcctgaat    60
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gataagctcg actttctctg gaaccgatgt ctccccgaag aaacgggtga accggatata    180
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gccctgttaa taggagccgg ctgtttcct ttattgaatg atgaagagag acatgatctg     360
aataaaatag cacaaagtct gcaaacagaa attccacagg atataaaaga agttacgctg    420
gtggtttcgg atcaaaagaa gatagaattg gacaataatg cccagatcgt ctattcggca    480
acaggtcagg tgcaggtcaa ctctaataaa cttgtggaag atgacattaa agaggaatac    540
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attgtgaata cttccggatt tgaagtacgc gttttgggta catccttcaa catatcggct    780
tataaaaatc aggaaaaagc cgcagtcgta ttggtagaag gttcggtcaa tgtaaaagac    840
caacaaaatc atcatataaa gatggtacct aacgagaaag tagaacttaa tcaggaaggt    900
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accttgcagg gagaaagcct aaagcaagtt ttgttacggc tgcaaaatta ttacggacaa    1020
aacatccggt gtgatgctgc gatagagaac gaacaaatgt ttggtaaaact ctttttaaat   1080
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<210> 65
<211> 1467
<212> DNA
<213> B.fragilis


<400> 65
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gaaggtaagc taaaactgga agaggtatat cgttttgcca atcggcagat aaaacttgga    180
aactgtgttt actgggattt tctttctctt tttgaagaaa tgaaaaacgg acttcgtgtc    240
gctgcccgga aaggctatga agtaaaaagt atggctattg cacctgggg agttgatttt     300
gggttaatag ataaggatgg taagttgctg ggcaacccgg tctgttatcg tgattcccgt    360
acggatggta tacctgaaag agtgtttaaa cagattgatc agactgttca ttacgctgaa    420
atcgggattc aggtgatgcc tatcaatact ctgtttcaac tttatagtat gaagcagaat    480
gatgatgtgc aactccgggt ggctgataag ctattattta tgcctgacct gttcagctat    540
tttcttaccg gagtagcgaa caatgaatat tgtatcgctt ctacttcaga gctactggat    600
gctcgtcagc gtaattggtc ggataacttg atcagtgagt tgggattacc ccgtcagctt    660
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gaacctcagg tatattatcc tgaataa                                        1467
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<210> 66
<211> 3051
<212> DNA
<213> B.fragilis

<400> 66
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gaggagcagt atgctatgct cgtgaaagag ttcagcacag ataagaacct tagacttgaa    180
tcggaacgtt tcattcagga acgtcaaaac aaagatcgca acaaggcatc tgtttctatc    240
gatggttatg ataagaagga accggagaag actgttgctg acgatgtgat taagacggtc    300
attccggaag atgtgcgtcc gaagtttaaa cctgtcggaa aaattgattt agataaactg    360
aaccggaagg ttgagaaaga accgatgaaa gaagagccaa aaccacaacc tgtagctgct    420
gaggaaaaga aagtagcgga agaggttaag cctgttgtaa tcgaagtgaa aaaagaagaa    480
gtcactgtga ctcctgctac ttcggaaccg aaaccggtga agaagaacc gaaaccggtg    540
gtggttgaaa agcctgttga aacagaaaag aaagtggttg aggaagtcaa gaaagaagaa    600
ccaaaagtcg tggtgtctcc agaaaaaaca gagaagaaag aagagaaacc ggtagcagaa    660
gcaccggtta ctccagtaga gaaggaagag gagggcgtat ttaagatccg tccgactgag    720
tttgtatcta agattaatgt tatcgggcag attgacttgg ctgcattaaa tcagtcgaca    780
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ggggatattg tacttgccgg aacaagctac ggccgtgtaa aagccatgtt caatgaacgt   2220
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gtaactgcta ctatcgaagt gcgtgaggta ttccacatta ctaaggtggg tacagtagcc   2820
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ggtgctgttg tgaaagaggg caaggtgaaa cgttcggata aggctcgcct gatccgtgat    2880
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gaagtaggta caaacttcga atgtggtatc agtcttgtta actacaacga tttgaaggta    3000
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<210> 67
<211> 1251
<212> DNA
<213> B.fragilis

<400> 67
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ggtgcgacta ctcagaagcc tcgcctggtg atcgattcga ttgtagacga atattattcg    180
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gaggcttcac gtgagactgt acgtcagttc attaatgccc gtagtactcg tgaggtcatt    300
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tggcagttgt tggcggcccg taaagggatt gcgattaaag tcattccgat gaatgataaa    480
ggtgagctgt tacttgaaga gtacgaaaat cttttttctg aacgtactaa gattgtcagc    540
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ttgcttgatc gattgggcat tgctgtccgt acgggacacc attgtgcaga accgttaatg    1140
cgtcgtttag gcattgaagg tacggttcgc gcctcatttg ccgtgtataa tacaaaagag    1200
gaagttgatg ctcttgtagc tggtatcgaa cgggtcagta agatgttctg a            1251
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<210> 68
<211> 204
<212> DNA
<213> B.fragilis

<400> 68
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cttgcgattg cgggtggtgc ttttacgtta ggtgtgattt ttttgcaaga catatgggga    120
ttgtattgtt tagtagctgt ttcggcttgt atgtcactaa tgtttcccac gatttatggc    180
cattgctctt cgtggtttgg gtga                                           204
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<210> 69
<211> 2088
<212> DNA
<213> B.fragilis

<400> 69
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tatcaaaaat ctaattgtat gaacgaaaga attaactatc taaaaacgta tattttagat     60
aaacgacacc attcacaaag gagaacaccg tcaagtatcg ggctggacaa attgaacaca    120
atttatgccc aacaaggttt atctcctgta gaacgtacta cagcctgttt cgcagctttg    180
atgaacgctg aactcccggt tatacttccg ggtgaaaaga tcgttttttac ccgtaccctt    240
acgcaagtac cggatatata cacccctgaa gaatggaacg aaataaaaaa caaatattac    300
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ggactggaag cgagaaaaca ggagatccga aagcgtcagg aaaatccctc cttaaatgaa    420
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gagaagtatg aacaatatgc actgctcaat aacgagacag aaattgcgca cactttacat    540
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accataaaga ccgaaggcgc tcaaaacttc agacaagctc tacagctttt gagaattctc    600
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gatctgcttg aagaattttt ccttgtatgc aataaggaca gcgacctgta tccgggtatg    780
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caactacaac taaacacagt cagccgggag acactgctac atgcccggaa acatcccgaa   1980
caacacaaaa atttgattgt cagagtatgg ggatggagcg gatattttgt ggaattagac   2040
gaatgttacc aaaatcacgt tatcaatcgg atcgaattcg gtctataa                2088
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<210> 70
<211> 2085
<212> DNA
<213> B.fragilis
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<400> 70
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ataaccgcta atgatgtatt aaacaaattc gaagggaaat acactccttt tcccggatcg    240
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gcctactttc ttgcaagcca ccccaataaa gaactggaaa acgaatcga cggatatgta    420
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gaaccacgca agaatatcgt tcccgcacat tccggccccg aggaagccgt aatggcatta    720
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tggcatgtat gtccatgttg cccaccgatg ttcctgaaaa tcatggctgc catgcccggt   1440
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cgaattccgg tcggtgacaa cagcgtccga ttgaaacaat taacctctta tccctggcac   1560
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<210> 71
<211> 783
<212> DNA
<213> B.fragilis

<400> 71
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tccggtgtac aaggtttccc gttatctcca caatcccatt acggcgcttc attccggata   660
aacctcctgg aaaggaaaga atatggtctc gacctgaatc tgggtaccga cagaagttac   720
aatgctgcta cccggcaatg ggaaaatact tataagatag gcccaaccat acgattaaaa   780
taa                                                              783
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<210> 72
<211> 792
<212> DNA
<213> B.fragilis

<400> 72
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ggatgtcctc tacgctgtgc atggtgccat aatcccgaag gtatatcgcc acagccgcaa   180
tacatgatta aaaaaggagt taaaagtatt tgtggatatc agataactgt ggaagaattg   240
gttaccatga tcgaaaagaa ccggtccatt tatacgctca accggggagg agttacacta   300
accggcggag aacccttatt tcaaccggat tttgttatcg aactgctccg acaacttccg   360
gacatacata cggctatcga aacaagcgga tacgcaaaca ctcacatttt caatgaggtt   420
acttctttag ctgatcttat tttattcgac atcaaacata cggacccgga aatgcaccgg   480
aaatatacag gagtggataa tacgattata ctggaaaatc ttgctttact ctgtaattcc   540
ggacgagatt ttatcattcg gatacctta atcccgggtg ttaatgatac ccgggaaaac   600
atgagtgcca ttcttgaaaa aatcaaagat gccaggaacc tgatacgtgt cgaaatcctt   660
agatatcacc gtacagcagg tgccaaatac gcaatgatcg gagaaacgta tcatcctccg   720
ttcgataccg gaaaggcgcc acaaatctat aatgtatttg aagaaataa tatcaaaaat   780
ctaattgtat ga                                                    792
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<210> 73
<211> 231
<212> DNA
<213> B.fragilis

<400> 73
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tatgggagta aagacgatta ttcgacattt acaaataatg gatgtctcag atcactgtta    120
aggcgtaatg gaccgaataa aatggcaaaa cggtctgtct attggctttt accgtttta    180
aattcattag gtgtcactcc acaaaaacgc ttgaatgtct tactgaaata g            231


<210> 74
<211> 708
<212> DNA
<213> B.fragilis

<400> 74
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tgttgtgtgg tttgtggagc tccgctgtcg aaagaagagg agtgcttgtg tattcgttgt    120
aatatgaact taccccgtac cggatttcat ctgcgaaagg ataatccggt tgagtgtctt    180
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attgatgatg tgctgactac cggatctaca actgtggcct gtgcatctac gcttttgaa    660
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<210> 75
<211> 267
<212> DNA
<213> B.fragilis

<400> 75
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ccgtgtatta atccccctca tgtggtggga aactatcctg ctaccccttt tttgttttat    180
attcccacct ccggagaacg accgataaag tggcatgctg aaaatcttcc caagggattg    240
aagctggata aaagaaacgg gggataa                                      267


<210> 76
<211> 4107
<212> DNA
<213> B.fragilis

<400> 76
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gttatcctat atgcacaaca gaacgaactt atgttccact ccctgggtag tcaacacgga    180
cttacctata gtgccgtacg ggatattctg caggattcaa aaggatatat ttggattgca    240
accctcaaag gactgaacag gtatgatgga tacaacatca aacaatatta taagtcagat    300
gacggactct cttcaaactg catcgagaaa ctcctactcc tcggtcagga tactctattg    360
atgggtacca atgaaggact gtgcttgtat gatatgatga gagagaagtt caccactatt    420
gttccacaaa ccaaggcccc actatatgta ttggacatgg cctacgacgg acgttcagtt    480
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accgataatg cgatctatac tatttataaa agccggggtg acattatgtg gatcggcact    1020
ttcttcggag gggtcagtta caccagcctg accgaaaata atttccacta cctgatagca    1080
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atcaggtatt taaacaaatc gacacacccg tcattaaacg gagataatgt ccatgcatta    1260
gccgaagatc actccggtaa tatctggatt ggcaacttta tcgatgggtt gcaaaaagtc    1320
gatttagcaa aaggctatat tcgttcatat aaaaacatag caggggggaca cgcgggacta    1380
tccaataatt caatctataa actttatgtt cataatcctg atactatgtt tataggaacc    1440
agccaaggtg tcaatatcta tcatttccgg accgattcat tcactccctt ccttccggat    1500
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tccacacatt tcaacggtat ttttcggtat catattccga cccatagtat ccatcgatat    1620
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gctaaagtaa agattataaa gactaatctg actattgctg aaatctcatg gcaactcgga    4020
ttcaataatc ccagctattt cagtaagaca ttcaagcgtt tttgtggagt gacacctaat    4080
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<210> 77
<211> 210
<212> DNA
<213> B.fragilis

<400> 77
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aaaagcctgg aaatggggggg atgccgcatg tatatccatg gcacgctggt ctttgtactc    180
ttcgtagaaa atgaaagcta cgggttgtga                                      210
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<210> 78
<211> 1149
<212> DNA
<213> B.fragilis

<400> 78
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acacaaagtc ctaagacggt attaatgagt gaactggcat ctgatgtacg ttatttccct    180
ttagaaacta ctgataattg tctgctgggg aatgaatgta gtattattta tgccggaaac    240
tcgattattg cgggtgacgc acagaccaga agtttttatc ggttcgataa aaatggtaag    300
tttatgaata agataggccg gcaaggacag gggcctgaag aatatgcggt aggattattg    360
ttttttactg accctgataa ccaaaaactg tatgttcagg atttccagga tataatctgt    420
tatggcttca atggtaaatt tctccgtcgt ataccggctc ctcacctgaa tatgggtacc    480
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gataatcccc aacaattgtt ccttatcgat gaaaatggga agaaactaaa gatctggaaa    600
ggatatatgg aacctggaaa gaaatatggt gttaacctat ctacccgcga tgtaatgtat    660
cgttatgggg gcgatattta ctttaaacct gcgttggaga atctgattta taaaattgat    720
gctaacagaa aaaagacatt ggcatggaaa tttgattgtt cggggaagga tgtggatgta    780
tctgccaatg aaatagatcc cggcaaacgt tttcaatcaa ttgcagtaca acaggttttt    840
gagtcagacc gttatttctt tgtgctttat gtcctgaaga atgaaagctt tgtgggattg    900
tatgataaac agaagaagag tttttcaaat gtgattataa aagatgattt ggcggcagga    960
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ggttatctga gtaaaggtaa acgctattcg aaagctttac tgccggaaag aaaaaaagaa   1080
ctggatgaat tgataaaccg attggatgaa gaggataatc cggtaatggt tgttgtaaca   1140
ttaaaataa                                                            1149
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<210> 79
<211> 1257
<212> DNA
<213> B.fragilis

<400> 79
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ttgttgctga ctcctccgat ggggtggaac agttggaata cattcggacg tcacctgaca    180
gaggagctac tgttgcaaac tgcagatgca atggtagaaa acggaatgcg tgatttgggg    240
tatgcttata ttaatatcga tgacttttgg cagttgcctg aaaggggagc cgacggtcat    300
atccaaattg ataaaacaaa gttcccgaga ggcatcaaat atgtggccga ttacttgcat    360
gagcgaggat tcaaacttgg aatttattcg gatgccgctg ataaaacttg tggtggggtt    420
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gagaagatgg ggagggcatt gagagcgacc gaccgttcta tcgtcttttc aatttgtgag    600
tggggacagc gtgaaccttg gaaatgggcg aagaaagtcg gcggacattt atggcgagta    660
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tctccattac tctgtggcaa tgatgtacgg cagatgaatg atagtacgtt acaaatactt    960
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gcttgtctga accggatatc cggacccgta gacgtggagt gaatgtaaa gacggtagaa   1140
ggattgtcat tggatcgggt atatgatgtt atagaaggca gccttgtggc tgaggcttct   1200
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<210> 80
<211> 291
<212> DNA
<213> B.fragilis

<400> 80
attatcatta tggaaaagaa aacaatcgta gcacgtgtag aagtactacc cggcaaagaa   60
caagcatttc tacaggcggc tgatgctcta atcaaaggta caagggcaga agaggggaat   120
attagttata atttatatca aaacccgtca caacccgtag cttttcatttt ctacgaagag   180
tacaaagacc agcgtgccat ggatatacat gcggcatccc cccatttcca ggcttttgga   240
aaggcaatca aggaaatgct ggcatccgat ttgataattg aaacttttta a   291

<210> 81
<211> 3183
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (2747)
<223> Identity of nucleotide sequences at the above locations are unknown.

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aacacaaaga gcatttcggg tacggtgaga gagaaaggca gtaatgaaac tgttattggt   180
gccactgtac aagtgaaagg aacacacaat ggggtgatta ctaatgagaa tggggagtat   240
acaattaaaa atgtatctcc gggacaagta cttgttttct caatgattgg tatgaatacg   300
gttgaaaaaa ctgtaggtag ccaaaatcgg atagatgtac tgatggatgc gggagtattg   360
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caaaatgctg atttctatca ggaatataaa gatcagatat ggaataccaa tccttcccgt   960
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ggtaacgatc agattgctcc gtatgcttat gcacagacct tatcttccag ccagagacaa   2040
gccatttttg gtgacggagc tattccggcc ttgttcacca gccgtatggc aaaccccgaa   2100
atcagttggg aagtaacgga agagtttaac ggcggtctcg atttagatat gtttaataac   2160

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cggctgaata tttcattgga tctctatacc aagacaactc gtgatatgct gcttgaacag    2220
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cgtggatttg aaatcagtgt aggcggtgtg ctgattgata agaaagactt tacgtggaat    2340
gcaacagtga actttagttc caatcagtcc aaagtactga gtctaggtgc tgagacacag    2400
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taa                                                                  3183


<210> 82
<211> 1149
<212> DNA
<213> B.fragilis


<400> 82
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acaattgacg gaaagcaaac cgatctctac tttctgagaa acaaaaacgg cattgaaatt    180
gccatcacca atttcggagg acgagtcgtt gaattctgga ctccggataa aaaagggcat    240
tttgaagaca tcgtcctcgg acacgatcat gtggacaaat atctccatta taaaggtgaa    300
agattttttgg gagccactat cggacggtat ggcaaccgga tcaacaaagg aaagtttacc    360
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cgagcttccc tcgcattgga aacccagcac tatccagata gtcctaacca accggcattc    1080
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gtacaatga                                                            1149


<210> 83
<211> 816
<212> DNA
<213> B.fragilis


<400> 83
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caactgtctg cgttgctccc cgaagccggg tttattgcgg aagaaggttc tgccgtttat    240
aagaatgagc cttattgctg ggttattgat ccgttggacg ggacgactaa ctacattcat    300
gacaatgctc cttattgtgt cagtatcgca ttgaggagct gtacagaatt acttttagga    360
gtggtgtatg aagtttgcag ggatgaatgt ttttacgcct ggaaaggtgg gaaggcttgg    420
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atgaacggag atgaactgca tgtctcgaaa atagaaaaca tagaagaggc gtttgtaatc    480
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ttgtatggag tggtaggagg aattcgtatg aatggctcgg ctgcatcggc tctttgttat    600
gtggcggccg gacgttttga tgcctgggcg gaagctttta tcgggaaatg ggattactcg    660
gctgcggcac tgattgtgtt ggaagccggc ggaaaagtaa ctgatttctt tggaagtgag    720
tattttattg aaggacatca tatcattgcg acgaatggcc ctttacatcc tgtctttcaa    780
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<210> 84
<211> 288
<212> DNA
<213> B.fragilis

<400> 84
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tatgatgctg ctttacgtaa tgtagctata ttgtatgcta atgcagggca tgtcaatgat    180
ggaattatga ccactgaccg gtttatgatg ccttcattga tgaatgaagg tccgttcgac    240
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<210> 85
<211> 1332
<212> DNA
<213> B.fragilis

<400> 85
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atccaggtgg tatatgatct atccgacttc agccatggct tcaccattgc tatcgctttg    180
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aaagcactga aaattattgc ttttctctac tttgtttctg cagtgggcag tgctgccatc    300
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atccgtacag gaggtacctt cattttcagt ttctttgcca ttatgatgtt cctaagcttc   1260
ttctttgctc tcaggctacc cgaaacaaag aacaagtctc tggagcagat acaaaaggaa   1320
ttgaccaatt aa                                                       1332
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<210> 86
<211> 198
<212> DNA
<213> B.fragilis

<400> 86
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aaacctccgg caaaacggaa gaataaaaag gaataccaat cgatgatggc agcactgccc    180
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actgcagaaa caaagtag   198

<210> 87
<211> 207
<212> DNA
<213> B.fragilis

<400> 87
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tcgatacctt tttttaatcc gatagcaata cccaatcctg ccacaccta ttcggacaaa   180
caaagaatga aagataatag atcttga   207

<210> 88
<211> 240
<212> DNA
<213> B.fragilis

<400> 88
aaaaactttc catactatgg gtgggatgct ttcgctaatg acaaatcaaa acaagatgct   60
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tctgcacaac cggttatatc agatgtttgt gaaatcagta gagattattt caataaagac   180
ttttctaaaa attataaact tgaatttaaa ttgaagatag taaattattt ttttaattaa   240

<210> 89
<211> 489
<212> DNA
<213> B.fragilis

<400> 89
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gatgtgtatc atcgttgtga gcatcttttc ggttcacatg gacgtacccct cgaagaggaa   180
gcttctcttt gtatcgcttt gttgaccggc tataatgcta ccatttataa tcacggtgat   240
aaggaagata aaatccagtc ggtcctcaat cgtagttggg atctcttgga tacacttccc   300
gtctctctgc tgaaatgtcg tttgttggta gcttgttacg ccgaggtctt tgacgaagag   360
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gagtttgaga ttgtggagca tttaaagagt ttggaggaaa atccgtatcc gaatacggat   480
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<210> 90
<211> 630
<212> DNA
<213> B.fragilis

<400> 90
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ttgctgaagg cgttctgcga ctacggtaag ggttcgacaa gctatcaaga aacccgtgca   180
aaactgttcg gcgcaggata tgaattgtat attctggcgt tcttcattgg tctgtatcat   240
ggtcagacta aagaccttgt ggcagataaa gccaagcgga aagactttgg ctgggcgatt   300
gagaattggg gaacggcaga ggctcgtggc ggtcgcaagc agtatggtca gattcgcgaa   360
tacatgttca tggctcttgt ggctcgtact ggaatagact ggattgccct tgacaaaggc   420
gatattacgc cccgcaaagt ggttgacttg ctcattgaca aaatggagaa gtacgcaaac   480
ttcggcttcg atttcatgca ggacaagctt gaagacaatc ccgattactt ctacaaagaa   540
acagcattcc tacaagtttt cctcaacttt atgcaaccat caacctctga aaatgcagaa   600
gaagaagagg aagcagaatc tttggattaa   630

<210> 91

<211> 603
<212> DNA
<213> B.fragilis

<400> 91
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attggctgtg atgctaccaa tgaagacgct gtgcgccggg tgtatgagat aaaacgacgt   180
gctgacagta aggcgatgct ggtattggta gactcgccgg tgaaagtgga attctatgtg   240
caggatgttc cttcggtagc ttgggatttg attgaggttg ccgataagcc attaactatc   300
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atccgggtga caaacgaggc gttttcccgt cgtttgtgcc agcagtttcg caaagcgatt   420
gtctcgacat ctgccaatgt cagcggacaa ccgggagcag ccaattttaa tgaaatcagc   480
gaagaaataa aatcgtcggt ggattacatt gtcaattttc gacaagatga tatgagtcgt   540
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tga                                                                 603
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<210> 92
<211> 1923
<212> DNA
<213> B.fragilis

<400> 92
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ggactgatgc ccaccggagg cggaaagtca attacgtttc aggttccggc ccttgccaaa   180
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tga                                                                1923
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<210> 93
<211> 1740

<212> DNA
<213> B.fragilis

<400> 93

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ctggaactgg tagacaacaa atcgaacaat gtgatgaacg gcatcgcctt cggacaaagt  1620
tcacacgtga gatatatcaa aaccaagcga tcatttgaca tctgctatac cattgaagag  1680
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<210> 94
<211> 1203
<212> DNA
<213> B.fragilis

<400> 94

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taa                                                                   1203


<210> 95
<211> 258
<212> DNA
<213> B.fragilis


<400> 95
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gtttcgtatt tggatgatgt ttctttatac cttcctgtca tgcatttgag ttggtcgcac     180
aacatcgtat tgatgcaaaa agtaaaagac ctcaaagcac gtaactggta tatgattcaa     240
agtctgaaaa atggttag                                                   258


<210> 96
<211> 1320
<212> DNA
<213> B.fragilis


<400> 96
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ccttattata agaaagtatt tcaagagcat ggcattactc cggagagtat ccagtctcta     180
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<210> 97
<211> 840
<212> DNA
<213> B.fragilis


<400> 97
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ctgaaagcat gccctatct gctggtgaac gacttgactc agcaggaaac agaagcgccg      420
gaaggtgaaa atgtaaccat tagcccggga aatgtagtac atgatgtagc cgttaacgca     480
aaaaatgcat gcaattccgg acaaagtaaa gtaaaagaaa agaaagcaga ggaaaataaa     540
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tcggattatg gaaggaaagg aacacgggta tggcaactga ttgccaatac ttgctggagt    780
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<211> 636
<212> DNA
<213> B.fragilis

<400> 98
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<210> 99
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<212> DNA
<213> B.fragilis

<400> 99
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taa                                                                    1923


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<211> 306
<212> DNA
<213> B.fragilis


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<210> 101
<211> 2118
<212> DNA
<213> B.fragilis


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<210> 102
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<212> DNA
<213> B.fragilis

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<210> 103
<211> 2571
<212> DNA
<213> B.fragilis

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<400> 104
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<210> 105
<211> 3255
<212> DNA
<213> B.fragilis

<400> 105

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<210> 106
<211> 267
<212> DNA
<213> B.fragilis


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gctattactt attttttctt atacatctac ttcacatact ctgctattgt ccgattattc    180
atattatacc cgtttaacga aatatccccg gttttatacc tggcatggca taaaaccggg    240
gacgaaacaa aaatctatac ccattag                                        267


<210> 107
<211> 432
<212> DNA
<213> B.fragilis


<400> 107
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gagtcaactg gtcgcgcatc aggtttgcgt tacatcttgc ataagtctaa gatacaaaca    240
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<210> 108
<211> 876
<212> DNA
<213> B.fragilis


<400> 108
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<210> 109
<211> 330
<212> DNA
<213> B.fragilis

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ctgatagaat cctacatatt ggacgcaaaa gaacaaaata tcaagacatg caaagattca    180
ttggcacgct acatagaggg aaaaaaactt tttggaaaaa taagaaatgg agtattcaag    240
ccattagttt taagcacaat cagaacttac gtcaacgaaa tctggaataa gatggaaaga    300
aagaaaaaga accaagaagg aaagcgctga                                     330
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<210> 110
<211> 195
<212> DNA
<213> B.fragilis

<400> 110
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tactacatat tgactttaat gtttcgtagc aaaggtaaaa ttagaattct aagctttttt    120
tcgagtggtt acgagaatcc gcaaaagggg aaagaaaaca tcctccccct tataatttta    180
ttttcaatca aataa                                                     195
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<210> 111
<211> 195
<212> DNA
<213> B.fragilis

<400> 111
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atagttctta aaaaagtgag tgtttcaata aacgatcgtt taattgaacg caaagataga    120
gggtattttc ataactgcaa aatgtttaat aaaaaaaatg ttttccttca tggcttgatc    180
tatttaattg tttga                                                     195
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<210> 112
<211> 1596
<212> DNA
<213> B.fragilis

<400> 112
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caaatggctc ctattacgag cgagcgtaac atacacaacc gttggtgtgc caacgaaaag    180
acggcaatgg aagctgcctt aggtatgtct tttgttggca aacgtgcatt agtctgcatg    240
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aaacatgtag gaatgaacgt agccgccgac tgttttatca attcggccat cacaggtgta    300
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caggatagcc gtttttatgg cgatttctct ttgatcccga tgtacgaacc gagcaaccag    420
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ggtggacaag attctgccgg cacaggtcgc cttgaagcca tttgcgccgg attaggtgta   1440
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<210> 113
<211> 429
<212> DNA
<213> B.fragilis

<400> 113

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```

<210> 114
<211> 1233
<212> DNA
<213> B.fragilis

<400> 114

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tatacaggaa aatccggatt ttccggagaa ttcggccaca ccagtacctt tgacaatgaa    780
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gactacatta ctcaaccaat aaaaacagct gtccgcaagt actcacttaa tctggtcaat   1140
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<210> 115
<211> 285
<212> DNA
<213> B.fragilis


<400> 115
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<210> 116
<211> 588
<212> DNA
<213> B.fragilis


<400> 116
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<210> 117
<211> 969
<212> DNA
<213> B.fragilis


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<210> 118
<211> 270
<212> DNA
<213> B.fragilis

<400> 118
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ataccgatat gggcgggatg tccgggcatt catacgcctt ggaaaagaga agtgatgcag   180
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<210> 119
<211> 1131
<212> DNA
<213> B.fragilis

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<210> 120
<211> 1569
<212> DNA
<213> B.fragilis

<400> 120
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gagattgatg aactacctgg aaaaagaata tatttcatag gagaagaatt ggatgtatcc   180
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gacttcaatg ctttcggaaa tgctgtttcg ctggacgaaa tttcattaat gtcgcctacg   1440
atggttactg ccgactatta ccccgtagcg ccaggaattc aaaagataag agttccccaa   1500
aaccttgtcg aaacatacaa gcagaacaaa gcctggaagc cattcgctga aaaaatcgtt   1560
gccctttga                                                           1569
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<210> 121
<211> 978
<212> DNA
<213> B.fragilis

<400> 121
attatgaaga aagaagattt aagaattgta tatatgggga ctccggactt tgccgtggaa     60
gccctgcaat gtctggttga aggcggttat aatgtggttg gagtgattac gatgcccgat    120
aaacctgccg gtcgcggaca taaaattcag tattctccgg taaagcaata tgcactggat    180
catcaactgc ctttgctgca accggaaaaa ctgaaagatg aagaattcat tcaggcgtta    240
cgtgagtgga aagccgatct acagattgtt gtagcttttc gtatgttgcc ggaagtggta    300
tggaatatgc cacgtctggg aacttttaat ctccatgctt ctctgcttcc gcaataccgt    360
ggagcagcgc ctataaactg ggcagtgatc aacggagaca ccgaaacagg tattactact    420
tttttcctga aacatgaaat agatacgggg gaagtaatcc agcaagtacg tattcccatt    480
gccgatacgg acaatgtaga gattgtgcat gacaagttga tgcatttggg cggtcggttg    540
gttatagaaa ctgtagacgc tattctggag ggaaaggtga aatcaatacc tcaggaagaa    600
atggcagtgg caggcgaact tcgtccggct ccgaagattt ttaaagagac ctgccgaatt    660
gactggaatc agccggtgaa acgggtttat gattttattc gtgggctttc gccttatccg    720
gctgcatgga gtgagttggt gaatccggaa ggggaagcgg ttgtcgtgaa aatctttgag    780
agtgagaagt tgccaaaggt gcatacgttg gctcccggaa gcattgttac tgatggaaaa    840
aacttttttga gagtggctgt gccggatgga tttgtaaatg tcctttcgtt gcagttgcca    900
ggtaaaaaga gactgaagac agatgaactt ttacgtggat tccatctgac tgaagcattt    960
aagatgaagg ctgtgtaa                                                   978
```

```
<210> 122
<211> 546
<212> DNA
<213> B.fragilis

<400> 122
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tatgctgtat atacagcacc gagagcagag aagaaagtga aggaacagct ggataagata    120
ggcgttgaaa actatttgcc tcttcaaccg gtagttcgtt tgtggaacaa tcgcaagaaa    180
aagatttttca ttcctgttgt tccgggatgt ctatttgtgc acatctcctc tgaggagatt    240
gctcatgtag ccggtattca tggagtagct ttttttactga aggaaaaggg acaatatgtt    300
tctataccgg aagttcaaat ggagactttc aagactatga tagagcactc ttgcgaactg    360
gtcgagtttg cgccaaatga gtttgttcct ggaaccatag tgcgagtaat aagtggacag    420
ttacaaggat tggaggctga gctagttgat tgccaaggaa ataataagtt gttactgcga    480
gttgaagggt tgggatgtgc tttggttaca gtctcaacgg attgtgtagc ttcaaaagag    540
gaataa                                                               546
```

```
<210> 123
<211> 1026
<212> DNA
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<213> B.fragilis

<400> 123
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aaagaaattg aaatgagtga agtaagacac gtgttaggta tatctggtgg aaaagacagt    60
gctgctcttg ccatctacct aaaagataaa taccccaatc ttcatattga gtattatagc   120
agcgacacca aatgtgagtt ggatgaaacc attcagttca ttgaccggtt gcgctcttac   180
ttaggacaca taacgacctt aattgcggca gaaggaagtc ctgaacctac tccttttgac   240
cactttctga aggtaagcgg tggctatctg ccatcggtac aagcaagatg gtgtacgcag   300
aaaatgaaac tcgccgagtt tgagaaattt gttggcgaca ccccaaccgt ttcatacgtg   360
ggtatccgcg gcgatgaaga ccgtgaaggc tatgtatcga caaagccaaa tatacaagcc   420
atattcccgt tccgcaagaa tatctggagt atggatgtta ttcacgaggt gctgcatgat   480
aagaacattg agaattttgc agaatgctat cgcaacgttg cagacgatga gacctatcaa   540
acagttgaag cggctctcac ttcaaagctt accaagcact tctactactc aaagaaattg   600
aatatgctac ttgatgctga tgtcatcacc tttaatcacg ccgtattcag ttttctgaag   660
caatacacag attaccctgt gggaaagttg gactatttcc cattgattga caatgatgag   720
gttttggtga gagaagaaat ctttcgcatc cttgaagata gcggcgtagg cataccagca   780
tattacaacc ttatcgactt tgaggtggat ggaaagaaag gacagtattg ccgtagccgc   840
tctggatgtt atttctgctt cttccagcag aagatagaat ggatttggct ctacgagcag   900
catcccgacc tttttcaaaaa ggcaatggag tacgaaaaag acggatatac gtggattcaa   960
ggcgagcctt tgagcgaact gatacgatcc ggagtcgtgt gcggcaaatc aagcttgacc  1020
agataa                                                             1026
```

<210> 124
<211> 1182
<212> DNA
<213> B.fragilis

<400> 124
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atgggcaatg aaaagaaaaa agttgtaaaa atagttccta cctattttga gcatgaaact    60
cgggacctaa aagagatttc agttttaaat agtttaggat gtaatgttat tgtagtggcc   120
aaaggagata atgctgtaat aattgaagag tcttgttata ttctgcatag attatgttct   180
aggcctttga tgccttttgt ctcaaatctg tttctgaata gacttttttc tctttatata   240
tgggttcgat acgtcaggaa gttgcatgga gaattgctga gttgccatga tttattttgt   300
ttgtgcattg gttggttatc tacccttggt ttgcgtaaaa agcctttcct ggtctatgat   360
tctcatgaat ttgagtatgg acgaaactgt aaacgaaatt ttgtttcaaa attgtttatt   420
aaaactttag aaaggttctt gtgtaaaaaa accgctctta atattgttgt aaatgaatct   480
attgcagatg cagtacaaac tcttcatggt ttgaataata gacctttagt agtccgaaat   540
gtccctttat actggaatat agatgttaat aaatgtgtat tgagacggaa aaaaatatgt   600
gaagcatatg gtattccaat tgatagtttt atcataatgt atcatgggt gattgcagct   660
gggcgcggca ttgagaatgc aatttatgct gttgagaatg ttgaaaatac ttgtttgttg   720
atttaggaa atggggaaaa aagctatatt gcgttattgg aaaaaatgat ttcttcttta   780
cgattagagc aaaaagtgtt ttttcacaca gctgtggaac attcaatatt gtgggaatat   840
attggtagtg ttgatgtaga actctctgtt atcttaaata cttgtataag ttattattat   900
gctttaccta ataaaatttt tgaatctatt caagcgatga tcccactcat agtcagtgat   960
ttccctgaga tggaaagggt tgtaaaaatg tatgatattg gagtttgttg taaatcagat  1020
gatgtgaata gtttagtaga agctatacga ctaatgaata aggataaagt attatattct  1080
cgttttaaag caaatatgca agatgccaag aaagaattat gttgggaaaa tgaaaaggag  1140
attttagagg gagcttatcg ttcaatattg atggatatat ga                     1182
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<210> 125
<211> 1821
<212> DNA
<213> B.fragilis

<400> 125
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aggtggagtg atcaagatta ttcgcgaatg atggaaaaag aaaagataag tttattacag    60
cgctttatta tctggcgcga gaataaaatc aaagaaaagc agtttattct cattttaagt   120
tttctggtcg gtattttac tgccattgct gcactgctcc taaaattctt tattcatacg   180
atacagaatt tcctgacaga taactttaat acgacggagg ccaactacct gtatctggtt   240
```

```
tatccggtgg tcggtatttt tctggcagga tggtttgtac gcaatatcgt aaaggatgat    300
atcagccatg gagtcacgaa gattctttat gcaatttcga ggaggcaggg gcgtatcaaa    360
agacataata tctggtcgtc gaccattgcc agtgccatta ccatcggttt cggcggatcg    420
gtaggagccg aggcacctat tgtgttgacc ggatcggcaa tcgggtcgaa tttgggaagt    480
atgttcaaga tggagcaccg tacactgatg ttgctggtag gctgtggagc ggcgggtgcc    540
atcggaggta ttttttaaagc gcctattgcc ggactggtgt ttacgcttga agtactgatg    600
atcgacctta ccatgtcgtc tttattacca ttgctgattt cggctgtcac ggctgccact    660
gtttcgtata ttacgaccgg acaggaggct atgtttaaat ttcatctgga tcagcctttt    720
gagttggagc gtattcctta tgtgattctt ttgggaatct tttgcggatt ggtatcgctt    780
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aagaagttgg cattgggagg tgtgatgctg agtgtgctca tcttcctctt tccacccttg    900
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gatacggtac tgaataactc gttgttttat ggatacggta atctgttgct ggtctatttg   1020
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ggcggtattt ttgcaccttc gctgtatctg ggatgtattg ccggtttttgt gttttcgcac   1140
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atggcagggg ttatgagtgg agtcatgcat gcacctctga ctggagtatt cctgattgcc   1260
gagctaacgg gcggatatga cctcttcctg cctctgatga ttgtttcggt cagttcgtat   1320
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gttgaaactg actttgtcag cgtgcgtccg gaaatggatc tgggcgaatt ggtgaaggcg   1500
atttcaactt cgcatcgtaa tatgtttcct gtgacggata aagacggggt cttgctgggc   1560
gtcgtgctac tggacgatat caggaacatc atgttccgtc aggaacttta tcatcgtttt   1620
accgttagta aactgatgac ctcggtccct gcccgtctgt atgatacaga tagcatggaa   1680
caggtgatgc agacttttga cgatacaaaa gcatggaact tacctgtggt caatgaagag   1740
ggcaaatacc tgggatttgt atccaaatct aagatattta attcatatcg ccaggtattg   1800
gtacatttct cggaagattg a                                              1821
```

<210> 126
<211> 252
<212> DNA
<213> B.fragilis

<400> 126
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ttggatgctt gtctgattaa agccaatgac tctgatccgg tgtatctgag tacgaacggt    120
gtgaaaagtc atattaaatc ggtagaagat tttaataagg tcggtttttga ttgggataaa    180
atcaaggtga tgtctccggc agaagtggat gcaatcccta ctgctccgga atatgagatc    240
gccaattggt ga                                                        252
```

<210> 127
<211> 936
<212> DNA
<213> B.fragilis

<400> 127
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aagaacggac tgcaaggagt atttattaat ggatcttccg gtgaaggata tatgttgacc    180
gatgaagaac gtatgaagct tgctgaacgt tgggtagaag tttcacctaa aggatttaag    240
gtgattgtac atgtaggtag ttgctgtgta aaatcaagtc gcaagcttgc cgaacacgct    300
caaaaaatcg gtgcatgggg aattggtgcc atggctcctc ctttttcctaa agtaggtcgt    360
gtcgaagagc tggtgaagta ttgtgaagaa atcgcttgcg gtgctcccga tcttcctttc    420
tattattatc atattcctgc atttaatgga gcattcttgt caatggttgc tttcttggaa    480
gcagtagacg gtcgtattcc taactttgcc ggaataaaat atactttttga aagtatgtat    540
gaatacaatc agtgtcgttt gtataaaggg ggtaagtttg atatgcttca cggacaagat    600
gaaacgatcc ttccatgcct agctatggga ggtgcccagg gaggtattgg cggaactacc    660
aactacaatg gtgtaaatct ggttggtatt atagaagcat ggaaagcagg tgatcttgag    720
aaagcacgtg aattacagaa tttctctcag gaagttatta atgtcatttg tcatttccgc    780
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ggaaatatcg taggtggaaa acgaatcatg aagttgatag gattggattt gggtaaaaat   840
cgtactcctt tccagaatat gacggacgat gaagaagtac gtatgaaggc tgaactggaa   900
gctattcatt tcttcgatcg ttgcaataag ttttaa   936

<210> 128
<211> 1113
<212> DNA
<213> B.fragilis

<400> 128
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actataacat ttgataagca tggacgatgt aattattgca cagatgcatt aaatctgatt   120
ggaaaggtct actttcctaa tgcggaaggc gaacagaagt tgcgtcaaat gattgaaatg   180
cttaaatatg aaggaaaggg aaaacaatat gactgcttaa tgggaatatc cggagggtta   240
gattctgcat atttagccta tttaggttct gtgaaatggg gattaagaat attggctgtc   300
catgtggacg atggctatga tacagagtta gcaacatcta atataaaaaa cttatgtgaa   360
gcctgtggta ttgaactgat ggtagaagct cctgattcgg agcaatttaa tgctatgaca   420
aaggctttta taaaagctga ggttcctaac attgcaatac ctcaagataa tattttgttt   480
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aatagggata tacagaaaaa atttggttcg aaacctattg ataaactgtc gttcttatca   660
tcttatcaaa agattgtgga tacgtatttta tataaaataa aaagtttacg tcctttaaat   720
tatattgatt ataataaaga atgtgcaatt catgaattga atgattttttg tggatttact   780
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caaatgtcta gagagcaggc tctagcagag ttagagaagc ctgtttatga taaaaataag   960
atggaaaaag atattgagtt tgtttttgaag aaaatagaga tgtctcgaga agagtttgaa   1020
gaacttataa atagaccagg gaaacaacat tcagattata gaatggacaa atttctacct   1080
tttttacata aaataaaaac atttttttgat taa   1113

<210> 129
<211> 1473
<212> DNA
<213> B.fragilis

<400> 129
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ttattggtgc tatataactt ttatatagcg atttgtggac gaattagggt tttttactatt   180
acatcttttt tttgtttatg ttacatatct tttgcttata tcggtagtat tctattgaat   240
attatgcatt ttgaggctga agattatttg ggtatgtatg cccgtcctga tattttttttc   300
cttgtttggg tatttacttt gttaggttta ctgttcttgt tattaggctt tgcgatagca   360
aatatcgtat ttaaaaatat ttgttatccc agaaaaaata gagatctaca attaattaaa   420
gtttcaatta gctgttttga taattcaaat aaaaatttct ttgttatttt atttctttttt   480
attttaagtt tctttgtttt gcttgtttat agaaatgcaa ttggaggatt tccattggaa   540
tctgtttttct ctgctgataa tggaactgca cttgcctttt tgagaagtga ggctactaat   600
aattttttctg ggaaatttta tagatatgta atgttatgg agacattacc tttgtttttta   660
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ttaatgtttg ggtttatatt acaaacatta gatattttat ttgttaggta tcttttttagtg   1260
aataagagtg ttttagtttc aagtttatat atatatatga tttattattt ctcacagttt   1320
acagaaacag gaataagtgg aataataata gatacagatc tttatatagt cttatttatt   1380

```
tcatttattt attgtttgat aaatagatat aatttgagaa gatatgggaa aaaaaagggt    1440
ttgccatgtt acaagtgtac atcctgcaga tga                                 1473
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<210> 130
<211> 378
<212> DNA
<213> B.fragilis

<400> 130
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tcgatttatt ccctcgtttt tattcatcac ataacccgct atgcagctca caaaacggga    180
aaatatcttc gaaaacaaat ctcaaaacag cttcgagtga aatttaaaca gacctcaaag    240
ggcaacgatt ttttcagcga atggcttcca ggctttgttc tgcttgtatg tttcgacaag    300
gttttgggga actcttatct tttgaattcc tggcgctacg gggtaatagt cggcagtaac    360
catcgtaggc gacattaa                                                  378
```

<210> 131
<211> 213
<212> DNA
<213> B.fragilis

<400> 131
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aaagcaagag tggcactcgc ccagaaaaag gctatctatg ccgccaatgg agaaatgctt    120
tctatgtatt gggacatcgg caagttattg tccgaaagcc aaacacaaat tggctgggca    180
acaatacgtt ggagcagttg cccggtgatt taa                                 213
```

<210> 132
<211> 498
<212> DNA
<213> B.fragilis

<400> 132
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aaaaggagat gcaggaatat ggcattattt tataaagcag taaaatcgac tatggcaact    60
aagtccggtg ataagaaatg gcacttgaac ttggtgaagg taggcaaggt ggtatctact    120
cagcaattag ctgagatgat tgcggaaaaa tcgtcgttga ctccgggtga tgtgcataat    180
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ctggacggat tgggtacttt tacgatgaaa gcgcgtacac ggggaagggg agtggacaaa    300
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gcgagtggga tcggtgcttc gggcaataat ggttccggag gtggtgatgg agacatagta    480
gatgatccga ctgcgtag                                                  498
```

<210> 133
<211> 1251
<212> DNA
<213> B.fragilis

<400> 133
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atgcaggtag atattgtgga acttcagtcg gcaaccaatt ttggccgttt aatggctgtt    180
ttcctttgga tttatggcct tatgagcccg atttccggta tgattgccga tagattgaat    240
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ctttatattc cggccggtct ttctcttatt gccgattatc atactgaaaa gtcacgttct    420
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attgcctatg cattggtctt gattatattc cttcgtgaga atgaagaaca tgccaggggc    600
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ttattcggta atattgcttt ttggattatt ctgttctatt ttgcagctcc cagtcttccc    720
ggatgggcta cgaagaattg gttgcctacc ctgtacgctg agaatctcga tatccctatg    780
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ttcatcagta tagtaggtgc aggatttctg tttggggtcg gtttcggtat gttcgatgcc   1020
aataatatgc ctattttgtg ccagtttgtt tcggccaaat atcgggcaac ggcctatggt   1080
ataatgaata tgaccggagt ttttgccgga gcagttgtaa caagcttgtt tggaaaatgg   1140
acggacggtg gcaatctggg attgggattt gctattctgg gaggtattgt attgttggct   1200
ttgggcatgc agttgtgctt tcttcgtccg cacacggata atatggaatg a             1251


<210> 134
<211> 684
<212> DNA
<213> B.fragilis


<400> 134
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tttattccag agatttctgt aagtttgtat cgtactataa ctatcataat tatgcaagat    120
ataataaacg ggcgttgcgg ttggtgcgga agtgacgaac tgtatgtgaa gtaccatgat    180
caagagtggg gaaaattggt gaccgatgac aagacgctgt ttgagtttct tgtgttggag    240
agtgctcagg ccggtttgag ttggataacc atccttaaga aacgtgaggg gtatcgcaaa    300
gccttttgca atttcgatgc tgagtcggtg gcacaaatga ccgatgaaga tgttgaacgg    360
ttgatgcact ttgatggcat tgtgaaaaat cgtctgaaga tcaaatcgac catcacaaat    420
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ttctttcccg acagaaaacc gattgtcaat acatttcaat cattgagtga gattccggta    540
tcatctcccg aatctgatgc catgagcaag gatatgaaaa acggggatt taaattcttt    600
ggaactacga tttgctatgc tcacttgcag gcctccggat ttatgaatga tcatctggtg    660
gattgcatct gccggaagag gtaa                                            684


<210> 135
<211> 222
<212> DNA
<213> B.fragilis


<400> 135
cacccatgcc gcactggaat gggtaggggg attgtacccc taaatcaaag cttaaatgaa     60
aaagccgtgg tcattaccga cttcaccgat gaaaacggta tcgaccggat gaaggagcag    120
atacaggaga agtacaaccg tatcaaagcc gacgtgcgtc agattgtcgc cgacgaattg    180
caacgcatcc agaacgatcc tgcattggca catctcattt ag                       222


<210> 136
<211> 630
<212> DNA
<213> B.fragilis


<400> 136
aatgatatac gctgcaaggc aaacaacaga attagcaaac ttgaccggaa ggtgtttcac     60
taccccggtg tcccccaatt atatcctttt gtgaacaata gcattaataa atcctggtac    120
gcccttcgta tcacctatag ccgtgagctt gcctttaagg aatacctgga ctcccgcgga    180
gtgaggaatt ttcttcccat gcgctatgaa tacgtattcc gtggtgagcg taagatccgt    240
aaattggttc ctgttgttca caacttggtt tttgtttatg ccactcgcag tgaggttgac    300
gaaatgaaat ccactgtcgg ggcttctctt cctattcgtt atatcatgga ccgtgagacc    360
cgtcagccta ttaccattcc tgaagtccaa atgcgtagtt ttatcgccgt tgccggtaat    420
tacgatgaac aggttgttta tctggatcct tcagtcgttt ccatgaaaag gggagaccgt    480
gtccgtgtca ccggtggcat cttcgaggga gttgagggtg agtttgtccg tatcaaaggt    540
gaccgccgtg tggtggtttc catccagggg gttatggcag ttgccacggc cttcattcat    600
```

ccctctttaa tcgaattaat aaagaattaa   630

<210> 137
<211> 1236
<212> DNA
<213> B.fragilis

<400> 137
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gccgatatcg aacaacctct cactcgtacc attcccatag aacggagcat ccgtgaacac   180
aggctgaaga tgcatcggct tccacaaagg acgtgtctct atgttctcgg agtccagctt   240
caaacggata tcctcacgac tcttacccgc aagcttcgga tcaaccagaa tacaagtaag   300
ccaaaagttg gaagcaaacc gcgaatcagg gttctccatg accgtaatac ccgccacatc   360
tttcagcaaa tcaacataca aagagtgaat ggcacggcga cgggcaatat gttcatcgag   420
gacaaacatc tgcccacgac cgatacccgc acagatgttg ctcatacggt aattgtaacc   480
gatatgggta tgctggtaat gcggagcggc atcacgagcc tgcgtagcgt agaactttgt   540
ctgtcgggcc tcctcttccg tacgacagat cagagcacct ccaccggaag tcgtgatcat   600
cttgttgcca ttgaaagaga gagcggccag ttcaccgaat gtgccacact tccgtccgtt   660
caattccgaa cccaaagcct ccgcggcatc ctccaatacg gggataccat aacgacccgc   720
aatatccatg atctcgtcca tcttggcagg cataccgtaa aggtggacag gaataatagc   780
cttcgggagc ttacccgtct tgcgcaaacg gtcctttata gcctcctcga gcaataccgg   840
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aatcggattg gcagaggcgg caaaagtaaa gctttggcag atcacttcat caccgggctt   960
cacattcaga agaatcaagc ccaagtgaag tgcagccgtt ccagcactca aagccactac 1020
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caaagggaca acccagttcg tatcaaaagc ctcttttata aagtcttgct cacggccacc 1140
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ttttcttacg taatagggaa tcaagaggaa aagtaa   1236

<210> 138
<211> 2316
<212> DNA
<213> B.fragilis

<400> 138
aatcaattgc gccaactgct ttatataata tataataagg tatgtcctat gctgaaatct   60
gatgtgatat ggccaaatag ccgacgattc aagtcgcgga cagaatggga gcctttgggc   120
ttcttctccg aagctttgtg taattccacg caatttgatc tgaagctggg cttcttttcc   180
tcatcggcca tcaatgtact ggcagacggt ttcgctacgt ttctctataa tggaggaaag   240
atgcgcatga ttatcaacga tattttatct accgaggata agcgtgcgat aattgtagca   300
gactcgtgcg acgatgtgga ttacttcaac ctgcaagatt tgggtggtat gagcgacacg   360
ttgtctaagc gcaaccagca tttcttcgag tgccttgctt ggctgattcg tcataaccgc   420
attgagataa aagtggttgt accaaaagct ggagagggca tagcccattc caagtgcggc   480
gtgttcttcg atggactgaa ccgtgtggca ttcgatggct catgcaactt ctcgaagacg   540
gcacttattg ccaacatcga gagcatcact gctttctgcg attgggacgg caaagcgat   600
gtgtgtcgca ttaaagatgt tgtggacgat ttcgaacgca ctttctctgg taacgacgag   660
agcgtgactt atcttaatac agaccatatc cgcatacata ttactgacac ctacaaaaac   720
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gacttgccta aaactgtgac cgcgttcctc ggtcgggcca agaataaggt gaaaagcatt   840
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tactcgcaag gacctcgcga ataccagcaa cttgcgtttg agaactggaa agcaaacaag   960
caaaaggggc tgtttgcaat ggcaacaggt acaggcaaaa ccatcacgtc gctcaactgt 1020
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acgcttgttg gccaatggga agaggagtgc aagaaattca atttcaagaa cgtcatacgg 1140
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ttgaaaggga gtgacaacaa tctatcatac ataatcattt ccacatacgc ctcgtttatc 1260
aaagacaagg tcttcaagtc gttgtctgtg ttcccgaaga caaagttgct gctgattgcc 1320
gacgaagccc acaatatggg ctcacgccgg atgttgaaca tcttggatgg catcccttat 1380

```
ttgcggcgca taggtttgtc ggctactccc gaacgccagt ttgaagaaga agcgaaccag    1440
acgctttatc atttctttgg cgcagaaaat ggctttactt acgagtattc gatgcaggag    1500
gccatagaca agggtgtttt gtgccgatat tattattatc cgcatgtcgt gcgtctgacg    1560
atgtcggaga tggaagaata catgagaata tcggtacaat tggctaaatt cttcaataac    1620
aaccattttg cggatagtaa tgagatactg accgcactgc tactgaaacg caagcggatt    1680
attcataagg cagagaacaa attggaggtg ttccggaata tacttgaaca gcgtttccaa    1740
gaaaaaggta acttgaaata tacgctggtc tatgtcccgg agggattgaa accagatacg    1800
gcagatgcag acgtttacga tgatacagac cagttacaag acgatgacta ttccgaaaag    1860
ctcatcaatg aatataccgc tgtagtgagt ggcattgaca gcaaagtcac agtacgtaag    1920
tttacatctg gcattaaaga acgtgaagaa ttgctgaagg gatttgccga cggtgatata    1980
gaggttctga cctcgatgaa atgtttggat gaaggcgttg atgttccgcg gagtgaactt    2040
gccattttct gcgcaagcac aggtaatccc cgacagttta tacagcgtcg aggaagaatt    2100
ttgcgaaaac atcccgacaa gcacatggct gtgatacatg atttggtggt ggcaccagaa    2160
gttaatatcg gtgaaggctc atatgctatg gaacgtagtc taatggcaac ggaattacgt    2220
cgagtcagga atttctcgtt gctttcggaa aacagcgacg acactatcaa cgaattggag    2280
gatataatga attactataa cttatcattg ttttaa                              2316
```

```
<210> 139
<211> 279
<212> DNA
<213> B.fragilis
```

```
<400> 139
ataaaaaagc gattcttatt ttgtgaaata ttctgtttgc tcaactccag tattgtacta    60
tccattaact caattgcaac cggagcatgt cgcaaagcca caagatttgc agcaaaagat    120
tcttccaatg tagaacaatg tacacatatc acggcttttt ccgtaggagg aagaggaact    180
aattttagtt ttaactctgt gattaaggct aatgtacctt ccgaacccgc taacaatttg    240
caaagattga aagactcaga acaattctta tcaaaatag                            279
```

```
<210> 140
<211> 597
<212> DNA
<213> B.fragilis
```

```
<400> 140
aagatttttt ttaataaata ttccatgcaa gattattttg ctcatgaaac agcaactgtc    60
gatgacggtt gccgaatcgg tgcaggcaca aagatatggc attacagcca tataatgacg    120
ggatgtgtgc ttggtgaacg atgcaatatc ggtcagaatg tggtaatttc tccagatgtg    180
gttttaggaa ataatgtcaa ggtacagaat aatgtatcgg tttatacagg tgttacttgt    240
gaagatgatg ttttttctcgg tccttcttgt gtctttacca atgtgataaa tcctcgtagt    300
gctgtcaatc gtaaatcaga atatgctaag actcgtgttg gtaaaggagc tacaataggt    360
gctaatgcta ctattgtatg cggacatgat attggtgaat ttgcctttat tggtgccggt    420
gcagttgtta ctaaaactgt tcctccttat gctctcttgg tgggtaatcc tgcccgtcag    480
ataggttgga tgagtgagca tggatatcgt ttagaatttg atgagagagg gatagctgag    540
tgtttggaaa gtaaagaatg ctatcagctt agagatggca aagtattcaa aatgtaa        597
```

```
<210> 141
<211> 225
<212> DNA
<213> B.fragilis
```

```
<400> 141
atccggctaa gaattggaat tgataagagt gaaattaaat tagcaaaaac atttcctgaa    60
aacaagacta caacgctttt caaaaacggt gagctgtcaa tctttctttt aattcggatc    120
attactctca tatatccatc aatattgaac gataagctcc ctctaaaatc tccttttcat    180
tttcccaaca taattctttc ttggcatctt gcatatttgc tttaa                     225
```

```
<210> 142
<211> 534
```

<212> DNA
<213> B.fragilis

<400> 142

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aaatcctcaa gagacaaaaa tcgcttcttc gtagactatc ttacctggaa caccaatgga      60
cgttgggccg cagagtataa agacggtgtc ttttatcatt atgaaaatgg tgatacgact     120
aaatgtcata cagattccat cttgaattac atatcggatg cgggtgagaa ctggcagatg     180
aagatagagg gtgatcattt tgtccatgct cccaatggtg actattcacg tgcgcatact     240
gatacggtaa tgcattatat cggatgggac ggtcgtaaat ggcgtgccga acttttgact     300
ctgatagatg gacttcatcc tgatctggct tccgactgtc cagaaggtat gctcctcaaa     360
gctgacaatg cggatgcggt ttatttggtt caattcggta gcctccatca cattcccaat     420
ccggatgttt attttgcctt atttcctgcc tgggataaaa tcacggtgaa aagtcaggag     480
gaagtgaatg ctattcctgt gggtattcct ctctctcttt ggatgcttgt ctga          534
```

<210> 143
<211> 183
<212> DNA
<213> B.fragilis

<400> 143

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atctcagcaa gtcttttact acatcccata acgttagtcg gattgacagc cttatccgta      60
gagaccatca caaacttttc cacaccatat ttgacagcta agtcagccat aatacgagta     120
cccagcacat tcacctgtat ggcttcagat acattatctt ccatcatggg cacatgttta     180
tag                                                                    183
```

<210> 144
<211> 1341
<212> DNA
<213> B.fragilis

<400> 144

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agatggcaaa gtattcaaaa tgtaatattt aattttaaaa ggccaagagt tatgtataat      60
aaattagtaa ataaagaagc taaattagct ttggtaggtc tgggttatgt aggacttcct     120
atagccttgg agtttgccca aaaaatatca gttataggtt ttgatataaa cgaggaccgt     180
ttggcgaaaa tgcgtgaagg aattgatccg tgcggagaat tggatagttc tgcttttgaa     240
aatgtagata tcgaatttac ttcctctatt gaaaagttga agaagcttc tttcttcata     300
gtggctgttc ctacaccaat tgataaatat aataaaccgg atttaactcc attgctgggt     360
gcttcccgtt ctgtagccaa agctttgaag ccgggagatt acatagttta tgaatctaca     420
gtttatccgg gttgtacgga agaggattgc cttcctgttt tagaagaagt tagtggcttg     480
aaagctggta tcgatttaa atatggttat tctcctgaac gtattaatcc tggtgagaaa     540
gtacatacgc ttcctaatac tattaaaata gtttccggtt gtgatccaga ggctttggat     600
acagttgcta gagtttatga attagttgta aaaccaggag ttcatcgtgc tccaaatgta     660
aaagttgctg aagctgctaa aatcattgaa aatactcagc gtgatgtcaa tattgctttg     720
atgaacgaat tatctattat tttcagtcgt atcggaatta atacttacga tgtattggaa     780
gcagccggta ctaaatggaa tttcttgaaa tttttatccag gattagtcgg aggacattgc     840
attggtgttg atccttatta tttggttcaa aaagccagtg aactgaagta tcattgtcag     900
ataatcagtg caggtcggta tatcaatgat agtatgggag gatatattgc caagaagctt     960
gtgaaacgtt tgatttcttt aggtaaaggt gtattaggtg ctcgtgttct agtgatggga    1020
gttactttta aagaaaatgt agcggacatt cgtaattcta aggttgtaga tattgtcaat    1080
gaattgaaag attttggttg cgatgtggac gttgttgatc catatgcaga cagtgatgaa    1140
gtacatagag agtatggatt tcgtttagta gagaaaccga gggataatta tgatgcagta    1200
attgttgccg tagcacatga tgaatataaa aatttagagg agaagtattt taaaaatatg    1260
acctatgatc atgccgtact tgtagatatt aagggggatgt atcgtgatag gattcataaa    1320
ttaaagtatt ggagtttgta a                                              1341
```

<210> 145
<211> 1113
<212> DNA
<213> B.fragilis

```
<400> 145
gaagatatgg gaaaaaaaag ggtttgccat gttacaagtg tacatcctgc agatgatatc    60
agaatattac acaaggaatg tgtctcgtta agtaatgctg gttacgaagt ttatcttgtg   120
gctcctgagg tgtcgaatca gttaaaaaat ggaattcaaa ttataggggt actcaataag   180
cctgtcagtc gatttcatcg tatcttattt tatattagat atgtctataa gaaagcatta   240
tgggttaatg cagatatata tcatttgcat gatccggaat tacttcttta tgcattgtta   300
ttgaaaaaaa aaggaaagat agtcattttc gattctcatg aagatattcc tcgtcaaata   360
ttgtcaaaag aatggattcc tttctttatc cgtaaatttta tatctttctc atatactaaa   420
tatgaaaagt ttatattgaa acaacttgat gctattgtaa ctgtaaatca agatatagct   480
tctagattgg ttcaatataa taagcgtaca tatgttgttt ccaattatcc tgtatttagg   540
aataatgtag aaagaagttc cgtgatggaa aggactattg gttttgcagg taatataaag   600
caagagtata tgcatgagaa tatccttatt gcattaacta atttgggaaa tgtccgttat   660
ttattggctg gtaatgctga ggagggttat ttaaaacaac ttcaaacttt taaaggatgg   720
gattttgtcg atttctacgg acggatatca aaagaaaaag tattgcttct ttatgataaa   780
gttgctattg gtatggccat tcatgattat actttaaatg ttggagggaa gaagggaggt   840
ctaggttttta ttaagaattt tgaatatatg gaagcaggaa tacctttaat ctgtacagat   900
tttgatattt ggaaagaaat agttgaagag tattattgtg gaatatgtgt aaatcctcat   960
gatgtaaata gtataactgg tgctatacaa tatttaatag ataatcctgt tattgctcgt  1020
aaaatgggag ataacggtcg tagggcagtg aaagaaaaat ttaattggga aacacaagag  1080
gagatacttt tgcaattata tgatagttta tga                                1113

<210> 146
<211> 543
<212> DNA
<213> B.fragilis

<400> 146
tgtgacttta tgaatgatgg tgagcggaaa gaaactgttt tatctttttt ttataggaaa    60
attcttaaaa aatcatctcc tccatattat tgttattatt ctttattgac tatttgtgcg   120
aaacctattc gcaagtggtt ctcagtagtg gtaatacccca tcattccttt ttctaatttta   180
cgtgtacagt gttatcggtg gtgtggttat aaaatagggc gtcatacttt tattggtatg   240
cgttgttatt tggatgatat gtgttatgat ttgattgaaa taggtgagaa tgtgaccata   300
tcttatggcg ttttttttgc atgccatggt cgtaaacagg ggcataatag aattattata   360
aaagatgggg catatattgg catgaatagt tctattatat ctcggagaga agaaggtttg   420
attattggaa aagaggcaat agtgggtgca tgtagtttag taaatagatc tgtaccagat   480
aataagactg tagttggtgt acctgctaaa gaattaaatg ctgttctaca cgggaataaa   540
tga                                                                  543

<210> 147
<211> 1200
<212> DNA
<213> B.fragilis

<400> 147
aaggagatta tcatcctttg gcaaaacttc ctttgtcaaa gcatccgttt ggctggtaat    60
aaagtaacag atataattat gaaacttcaa atggttgatc ttcacggtca atatcttaat   120
attaaaccgg aagtggatgc cggtattcgg caggtcattg aaacttccgc tttttatcaat   180
ggtccgcagg tcaaggagtt tgcggagaac ctgaaggctt acatgggtag caagtatgtg   240
ataacttgtg gtaatggtac agatgcactt caaatagctt taatggcatt ggatttgaaa   300
cccggtgatg aagtgattgt tcctgctttt acctatgttg cttctgccga ggtgatcgga   360
ttattagggc tgattcctgt gatggtggat gtggattatg ctaccttcaa tgtaacggtt   420
tccaatctgg aaaaggcttt gagtcctaaa actaaagcga ttattccggt gcatctgttt   480
ggccagtctt gtgatatgga acctattatg cagtttgcca acagcatgg tatttatgtg   540
attgaagaca atgctcaggc tattggagca gtatatactt tctctgatgg tagtaagaag   600
catacgggag ctatcggtca cataggctgt acttcttttt tcccttctaa aaatctggga   660
tgttatggtg acggtggagc tattttttacg gatgacgatg aattggcaga acgtttgcgc   720
atgattgcca atcatggaca acaagtgaag tatcatcata aagtcatcgg atgtaattcg   780
cgtttggata ctcttcaggc tgcgatactc aatgttaaat tgaaacactt ggatgaatat   840
```

```
agccatgccc gtcatgaagc ggcacaatat tacactttcc agttacaggg ggtgaaaggg    900
attattactc ccgaggaact tcctttaagt actcatgtct atcatcaata tactttaaaa    960
gtactggatg gcaaacgtga cgtgctaaag cagcatcttg ctgatgcggg tattccgagt   1020
atgatttatt atccgttgcc tttgcagcaa caggaggctt ttcagactat cgcacgtgca   1080
gcagaaccat tagatactgc tgaaaaactg gcatattcag ttctttctct tcccattcat   1140
accgaactat ctactgaaca acaggattta gtcatcaata gtataaaaga ttttttttaa   1200
```

<210> 148
<211> 1122
<212> DNA
<213> B.fragilis

<400> 148
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gtaataacta tgactgaaga taagaatata aataaaacga ctccgcaatc tgaggaacaa     60
gaaattgatc tgatagagtt ggctcagaaa gtttgggccg gtcgtaaact agtattaaag    120
gtttgtggtg ttgccgtgtt agtaggactt gtagtggctt ttagtattcc taaagagtat    180
tctacaagtg taacactggc accggaaaca ggtagcaagt cttctactgg aggcatgggg    240
gcattagccg ctatggacgg tattaatctt ggcagttcaa ccggagaaga tgcactttct    300
cccgaattgt atcctgatat tgttagttcc acaccttttc tattggaaat gttcgatgtg    360
aaggttgctg atcagaaagg taagattaat acaactttgt atgagtactt ggataaatat    420
caacgggctc cttggtgggg agcggttgct tcagctcctt tcaaagcatt aggttgggtt    480
gtatctttgt ttaaagatgc accggaggaa cagggagatg caaagataga tcctttctat    540
ttgactgcag atcaagcagg aatagcagat gctttgagtc atcgtatatc tgtttcggta    600
gataagaaaa caggagtgac tacacttact gtgacaatgc aggatccatt aatttctgca    660
gcattaacag atacggtaat gcattgtttg caaaattata tcacagatta tcgtaccaat    720
aaagcgcgtc atgatttggc ttttactgag aaactatta atgaagctca ggagaactac    780
tatgaagcgc agcagaaata tgctcgtttt atggatggta atcaaaatat cattatgcaa    840
agttttcgta cagagcaaga gcgtttgcag aatgagatga atttagctta tggagtattc    900
actcaagtgt cgcaacaatt gcaattggcg aaagctaaag tacaggaaat aactcctgtt    960
tatactgtag tacaacctgc tacagtccct ttgagaccgg ctaaacctaa taaaatcatg   1020
attttaattg gttttgtatt cttagcgggt gtaggtagta taggatggat tctctttgtt   1080
aaagatttat tgaacggatg gaagaaacag ccagaaaaat aa                       1122
```

<210> 149
<211> 681
<212> DNA
<213> B.fragilis

<400> 149
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ttttgtgcta ttattttaag aatgatgaat atgaaaccaa ttatatcccc ttctatcctt     60
tctgcagatt tcgcatatct ggcaaaggac attgagatga tcaaccgtag tgaagcagac    120
tgggtacaca ttgatattat ggacggagta tttgtgccga acatatcttt cggctttccg    180
gtactgaaat atgtagctaa gttaacttca aagccgttgg atgtacatct gatgatagtc    240
aatccggaaa agtttattcc tgaagtgaag gcattgggtg cccacatcat gaatgtgcat    300
tacgaggcat gtcctcactt acaccgggtc gtgcaactga ttcgtgaagc aggtatgcaa    360
ccagcggtca ctatcaatcc ggccactccg ataaccctgt tgcaggatat tatccgggat    420
gtatatatgg tgctggttat gagtgtgaac cccggatttg gcggacaaaa atttattgaa    480
cactcggtag agaaagtgaa agagcttcgt gaactgattg agcgtaccgg atctaaagca    540
ctgatcgaag ttgatggagg ggtaaatctg gaaacaggcg cccgtctgat agctgccggg    600
gcagatgcat tggtggcagg aaatgctatc tttgctgctg agaatccgga aggaatgatt    660
cacgccatga aagggctgta g                                              681
```

<210> 150
<211> 1047
<212> DNA
<213> B.fragilis

<400> 150
```
atattctata tgaataagaa aagaaagaaa atatttctca gcatactggc tacttttttc     60
```

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ttcatttgta tcgccggtgc aggaacagtc tattactacc tattttaccc ccagtttcat    120
ccaagtaaga caacttatat ctatatagac cgcgatgata ctacagactc catcttcaat    180
aaaataaaaa agcaaggaaa ccctcatagc tttaatggct tcaaatggat gtcccatttc    240
cgtgaatata gtaaaaatat ccataccgga cgttatgcca tcaaacccgg agatagcact    300
tatcaattat acagtagatt atcaagaggc tatcaaactc ctgtcaacct gacaattgga    360
agtgtccgaa cacttgacag attagtccgc agcgtaggga aacagttaat gatagattcc    420
gctgaaattg ccatggcact atacgactct atttttctgg aaaaaatggg atacacagaa    480
gccaccatcc cctgcttatt tattcccgaa acatatcagg tatattggga tgtcagtgca    540
gcagactttt tagcccgaat gaagaaagag catgataaat tttggaacaa agaccgactc    600
tcaaaggccc aagcaatagg gatgactcct gaagaaattt gcacgctggc ctccatcgta    660
gaagaagaaa ccaacaacaa tgcagaaaag cctatggttg caggattgta catcaaccga    720
ttacatgccg gcatgcccct gcaagccgac ccgactatca aattcgcact acaagatttc    780
gggttacgca gaatcaccaa tcaacactta gacgtacagt ctccctataa cacttacctg    840
aatgcgggac tgcctccggg tcctatccgg ataccatcac ccaaggggct ggacagtgtc    900
ttgaattatg taaagcataa ctatatctat atgtgcgcaa aagaagattt ctccggtacg    960
cataattttg cctccaacta tgcagatcac atggttaatg caagaaaata ctggaaagcg   1020
ctgaatgaaa gaaagatttt taagtaa                                       1047
```

<210> 151
<211> 891
<212> DNA
<213> B.fragilis

<400> 151
```
attttcaata tcatgaaaaa taagcgaaaa agaccatcta aaaaacaaca ccacaattcg     60
tttaagagct tttggataat agctctattt gcgattttac cattaatcta cggagtctat    120
ctctgtacac cggaaattca agctgtattc tttcaggcaa ccaaagtatc aagaccgaat    180
gttgcacgtc ccaattattc tcacgatgaa aatctgaaga ttccggtttc ccaattccca    240
ttaacagagc agataattca tcacaaaggt tatactgtgt cttataataa ggataaaaag    300
atccccaatt gggtagctta cgaactcacc aagcaaaaga cacaagggaa tataaaaaga    360
aacgaacgat tcatcgccga tcctgtcgtg aaaggaggta tggcaaacaa ttctgattat    420
tcccgttccg gatttgacaa aggtcatatg gcacctgctg ccgacatgaa atggagtaat    480
gaagccatga aagaatcctt ttatttcagc aatgtatgtc cgcaacatcc cgaacttaac    540
cgtcggaaat ggaaaacact ggaggacaag gtccgcgaat gggctgtagc cgatagtgca    600
atccttatta tttgcggccc ggtcacgaat aaaaaatctc cggtaatcgg caaaagccgg    660
gtgactgttc catcaaagtt ctttaaggtc atcctctctc ttcacggctc cactcccaaa    720
gctatcggat ttattttaa gaatgaacgc gcaatagcac cttttacgaaa ttatgccgtc    780
tctattgaca gcattgaaca actcaccgga ctggatttct tttcttcact ccccgattct    840
ttagaaaatg aaatagaaag tcggatagat accaccttat ggagcatcta a             891
```

<210> 152
<211> 1233
<212> DNA
<213> B.fragilis

<400> 152
```
tttatgaata tacttcttat taatcattat gctggatatc caaatttagg aatggaatat     60
cgtccttatt atctttctaa agaatgggta aggatggggc atcaggttag agttttggcc    120
gctaattatt ctcatttaag gattaagcaa cctttagata gctttagtgt aatagatggt    180
atacattatc gttggatatc agcaggaagg tatagcggaa atggtgctaa gcgtgtatgt    240
tcaatgtttt gttttgttct aaattaagg ttgtatttcc ggaactatct cgatggtttt    300
attccagatc ttgtaattgc atcatctact tatccattag atatctatcc agctcataaa    360
atagcccaat attatcatgc aaaacttatt tatgaggtac atgacttgtg gccattatct    420
ccaattgaaa taggaggata ttctaaatat catcctttca ttgcactgtt gcaaaaggca    480
gaaaatgatg catataaatt tagtgataaa gttatatcgt tacttccaaa tgcatgttca    540
catatggtct ctcatggaat ggatgcaaat aaatttgttt atatccccaa tgggtatgat    600
ccggaagagt ggacatctca atgtgatctt tcgcctttac atatgcaatt tatatccgaa    660
ttgaaaaata gggggaaaaa ggttattggt tatgcaggtg gccatgcgaa atcgaatgca    720
ttggattatt tgttggaggc aatgaaaatt gtctttgata aaaaccagaa tatagtatgt    780
```

```
cttttggttg gtaatgggca agaaaaggga cgtttagtag aacgtgttca aaaggaaggc    840
attaagaata tttattttct ggatccagta cctaaaaaaa aaatacctga attattaaat    900
cagatggatg tattatatat tggttgggag aaaaacccat tatatcgttt tggtatatct    960
cctaataagt taattgatta tatgatgtct cagaaaccga tattgcattc ggtttgtgcc   1020
gcaaatgatt gggtaaagga agccgattgt ggaattacgg tgaatgcgga gtcgccacaa   1080
gaaatagcgg caggtattat agaaatattt tcgtttttcag atgtagagtt aatcaataaa   1140
gggggtaggg ggagaaaatt tgcagaagag aatttaagtt atcctttcct tgcaaagaag   1200
ttcatcgaag aatgcataaa caatagagtg taa                                1233
```

```
<210> 153
<211> 1002
<212> DNA
<213> B.fragilis
```

```
<400> 153
aattactaca tttgcaacca aactaaaaaa actttgatca tgccgaactt cttaaatct     60
ttttttgcgg ggaaaacaga aaaccctgag gaagaaaaac aaaaaaacgc caaaaagaac   120
tttgagatat ttaaatatga cggcctgcgt gcccaacgta tgggacgtcc ggactatgcc   180
attaagtgct ttaacgaagc gctggccatt gaagaagatt tcgaaacact gaattatctg   240
agccagcttt acatccagac cggtgaattc gggaaagcac atgagttgct ggaacgtatg   300
atcgcactgg aaccagaatt gacaagcacg tacctgaccc tggccaatct ctgcttcatg   360
caagaagatt atcaggagat ggccgatgcc gcccagaaag ccatcgcact ggaagaagga   420
aacgcaatgg cacactacct gttgggcaaa gccaatcatg gattggataa cggaataatg   480
accatcgccc acctgacaaa agccattgtg ctgaaagatg atttcacgga agcccgactg   540
ctccgtgccg aagcactgta taagatgcag caatttgcag aggctatgga agatattgaa   600
gccatactta cacagaatcc ggacgaagaa gctgccctcc tgctacgtgg caaaataaaa   660
gaagccaccg gaaaggaaga agaagcagag acggactatc tccatgtgac agagataaac   720
cctttcaacg aacaagctta cctatatctg ggacaactat ttatcacaca gaagaaattg   780
acagctgcta ttgagttgtt tgacgaagct atcgagttga atccaaactt tggagccgcc   840
tatcatgaac ggggacgtgc caaactatta aacggggaca aagacggttc gattgaagat   900
atgaagaaat cgctggagct gaacccgaaa gagggagaga acctgaacgg acagttcaat   960
aatcagcaag cagaaacaac cccaaacgta ttgggactgt aa                     1002
```

```
<210> 154
<211> 810
<212> DNA
<213> B.fragilis
```

```
<400> 154
tacatataca ttatagttat gatattctat ttttcaggaa ctggaaattc taaatggatt     60
gcggagcaga tcgctaaggc acaaaacgaa gtgcttgttt ttatgccgaa tgccatcaga   120
gacggaatag aagagtttgt gttggcggat gatgaaaaag taggttttgt tttccctgtt   180
tattcatggg gacctccgtt gagcgtattg cggttcttgg attggattac tttatctaat   240
tatcattctc aatacgtctt ttttgtctgt tcctgcggag atgatacagg gctgacggaa   300
gaactctttc gccgggcatt gtctcgtaaa ggaatggagt gtaatgccgg tttttcagtg   360
gctatgccta ataattatgt tttgcttccc ggatttgatg tggataagaa ggaactggag   420
aaaaagaagt tggatgaagc agttggcagg gtagaagaga ttaatgattc gataaccgga   480
aagaaaatag gttttcattg taatgaggga agttttccat ggtttaaaac caaagtactc   540
aatccgctct ttaatcgttt tatgacctcg gcaaaaccat tttacgccac tgatgattgt   600
atcgggtgta aacgttgtga aaggatatgt ccggttggga acgtggtgat gataggggtgg   660
aggcctgtgt ggggaatgga ttgtacatcc tgcctggctt gctatcatgt ttgtccgaag   720
catgctgtgc agtacggaag aaggactaaa cgtaaaggac agtatttaaa tcccaatgtg   780
agtatttcac atgaggcggc cgcccaatag                                    810
```

```
<210> 155
<211> 2175
<212> DNA
<213> B.fragilis
```

<400> 155

```
tatatgataa tcaagagcgt aacaataaat aatttccgca gttactacag ggagaatacc     60
tttgagtttt caaagggact gactctgatt attggtggca atggtgatgg taagaccaca    120
ttctttgagg cgttggagtg gttgcttgac acagctcatg agacgaaaga cccttcgctc    180
atatcggaaa tgcgcaagtc ggaattggac gaagatgaag ccgacaccat gtctgtttca    240
atgttttttg agcataatgg agaaaaagag gtgtcgaaga gtctgacctt cgaaaagaga    300
aacggagtat gtcaagtgac aaattttgct ttcaaaggtt acgagactaa tggcgctgag    360
cgtatgcaac gaaagggcag ctcgctaatt gacgtgtgct ttgatgcgtt cattcgtaag    420
tattgcctgt tcaaaggtga gagccaattg aatgttttta atgagaaaga ggcgttgaga    480
acgcttgtag ataaattctc cgacatccgc aagtttgaag attatgtcgc tgttgctact    540
gaacttgaag caaaatccga tcgagcatac gcaaaggagt gccagtcgga taagaagatt    600
tcgcagaggg tttcggaact ccaatgtaag aaagagcatc ttggacaaca gatagacgag    660
ataaaatgcg acatcaggaa acaggaagat gtggtgagca cctattctgt gaaacttgaa    720
gatttggaga agcaccaggt caccagcgaa agttatcagg acatcaagaa gcgcatagac    780
acgcaacgcg agaagctggc taaactccgt tccatgacga tggtgcgcta caatacgaac    840
ctactcgatg agttctgggc attgatgcca taccagaatg tgtttgagga atttcagaaa    900
aaggtatcgg cgttgagcaa agagaagcga cgtctcagcg accttgacat acaggaaaaa    960
gcggcggcaa aggctaagaa ggaagtcgtt gatgaactga catcaagtct gcaaagcgac   1020
ttcacacgtt tgccttggta tctgcccgat ggggaaacga tgcaagagat gcttgacgaa   1080
gaagtatgca aggtatgcgg ccgaccagca aagaagggca cgccggagta tcgtttcatg   1140
gagaacaagc tgagggaata cttggaacat aagtcgcagg aacttgcggc caagcaagaa   1200
gaattaccag acactccgct ttttggtact caatatatcg aggagcttca ttcgctttct   1260
atcagttttg gaggcatgac ggcgagagat atttctaaga aatatcgcga ggttgtggat   1320
aaactggaac ttgtggcaag aatcaaacgg gacattgcag agaaagaggc tgagttgcta   1380
gaactggaag acgagaaatc ccgtttgctc atccaagccg acggacttac ggaagcgatg   1440
cttgataaga atttccgcga catcaagggt ttctatgagc agcgagaccg agcaaaaaac   1500
cgcattagcg attaccgcga gcggttggtc aaggtccaga tggaatacga caaggtgaag   1560
gaagaatttg agcaactgaa tccgacaacc ggcatggcga aagtgtataa ccgtgtgcat   1620
acgttgctcg acaaagtgat gcgggctttc gttaatgcaa agagcgaaaa cctgcgccgc   1680
ttcctcgcaa gccttgagga gcgcaccaat agttatttcg agaaactgaa caagaatgac   1740
ttccgtggcg taatccgcat tgtacagaca gcgagcgatt cggcagagat aaagctattt   1800
agttctaacg gcacgccaat caaaaatccg ggcggtgcgc aggagacaac catgtatatg   1860
tcactactct ttgctatctc cgatctcact acgctgaagc gcgaagagga ttatccgctc   1920
atattcgatg cgccaacttc atcgtttgag aacttcaaag agaacgtctt ctacaacatc   1980
atcgacaaaa tccagaaaca gtgcattatc gtgacgaaag acttgcttga agtggacaaa   2040
ctgacgggca agaagactct gaacgaagcg caaatagaag ctttgacctg ttctgtatat   2100
cgcatcgaga aacagacggg ctataacgag accgaccttt caacaatacg aaccatcata   2160
actccaataa aataa                                                    2175
```

<210> 156
<211> 471
<212> DNA
<213> B.fragilis

<400> 156

```
ttttgcccaa taataacaaa ggttaagaga aaacaaatgg aagaaatcga atttcatcac     60
agtttaccta tacaactacg attcaacgac gtagacaaat tcggacacgt caacaacacc    120
gtctattttt cattttacga tctcggcaaa acagaatatt tcgcttctgt atgcccggga    180
gtcgactggg aaaaagacgg cattgtagtc gtacacattg aagccgactt tctggcacag    240
attttttcat cggaccacat cgccgtacaa accgcagttt gcgaaatcgg aaccaaaagc    300
tttcatctgc tgcaacgggt catcgacacc gaaacaatgg aagtgaaatg catctgtcgt    360
tcggtcatgg tgacattcga tctggagaga cacgaatcca agccactgac cgaagaatgg    420
atagaggcaa tctgtcggtt cgaagggaga gacttaagaa agaaaaaata a              471
```

<210> 157
<211> 216
<212> DNA
<213> B.fragilis

<400> 157
```
cgaaaaccaa ttaacaatca aatagttatt aatttctatt tttggttgtt ggtagagaaa    60
gcgagcatta tggggcatgt tttgctgcga cttccgttac ttatccgtta ccttgcaagt   120
acggatattt caaggagtat aaacgattat ttttcaatgc tttgcgtcac ttttcataac   180
ttcaaaaagc tcaatattta tttagtttgt aactaa                            216
```

<210> 158
<211> 525
<212> DNA
<213> B.fragilis

<400> 158
```
agggttggga tgtgctttgg ttacagtctc aacggattgt gtagcttcaa aagaggaata    60
atgaaactga ttaccgaagg gcttcttgat aaagtgactg atcaggcaaa agagaattca   120
cgcctgcgga tgaattacaa tttccatgac tccatggatg ctcctattca caggatgttg   180
aatgctttgg agccgggaac ttacttgccg ccacatcgtc ataagaatcc ggataaggaa   240
gaagtttatc ttgtattgag aggtagcttg ttggctatcc tgtttgatga tgagggtaat   300
gtaacggaaa aggttcattt gaatccagct gagggacatt atggaattga gattcctccc   360
tgtgtatggc atactatcgt tgtcttagaa tctggaaccg ttatttatga aataaagcaa   420
gggccttttg ctcctcttat tcctgaaaat ttagcatctt gggcacctcc tgcaactgat   480
gaggaggcgg cccgagtatt tatgcagcga atgcttgagc tttaa                  525
```

<210> 159
<211> 975
<212> DNA
<213> B.fragilis

<400> 159
```
agccgtcttg tgaactttca gtatttacac cgatatcctt ttatacgcct gctattccct    60
ctgatagcag gctttcttgt tggcaatggg ttgttttttta ggggagtctg tgtttcgaag   120
ggcgtgctgg caggagggct ggcaggatta tttcttctgc tcctagtcgt ttatttttct   180
caccgttact ctttacgttg gatgttcggc tgtattttgt acctgttcgt gttttttggc   240
ggagcaggtg gaataaatca ggctttgcaa cagacgcttt attcttttc ggaacaaaaa    300
tgtgtttacc gggctgtagt gttggaacaa ccggagccga aggaacatag cttcctttgt   360
cgggcatttt tggaggaaag gcaggattca gtgtgcacca tgccggtaaa tcgaaaagtt   420
ttgctttata tatcgaagga ttcattgtcc gaagggttac gtagtgggga tgagttaata   480
ttttttgccc atgtatctcc accttcaaat aatggtaatc ccgatgaatt tgattatgcg   540
cgttatctgc gctacaaagg gattagcggg attgctttg ttgcaagtgg gaattggaaa    600
attaccggat atcggttttc ccgatcatgc aggcagattg cattggaata ccgggatcgg   660
attcttgacc aatatcgtgc tttgaagttt aatccggatg aatttgccgt acttgccgca   720
cttacggtag gttataagga ggagttgagc gaagatattc gggaaactta ctctgtatcg   780
ggagccagtc atgtactggc actttccgga cttcatatcg ggtttctgta tatgatgctt   840
ctgttttttc tgaagtggct gccagggaat gcttttggtg tgagactttt tcgtgcggta   900
gtgataatca ccgcattgtg gggattcgct tttttttaccg gtctctctcc ttcggtcgtc   960
cgttccgttg tcttc                                                   975
```

<210> 160
<211> 252
<212> DNA
<213> B.fragilis

<400> 160
```
cttatcattg ttttaacgat ggcacattac aacaataaca gcaacagaat cttgcaggct    60
gttttggccg atgagaaact gatagagttt ggcgagtaca atcccgctga ctatcaaagc   120
ttggacgagg ctcttgtgtc tgataacctt gtggtgaata ctgtggcaag gattatcaac   180
gaggtaaatg aggagagcag ctcacgggaa atatataata tggtaacaac ctatctaaag   240
aataatatat ga                                                      252
```

<210> 161

```
<211> 615
<212> DNA
<213> B.fragilis

<400> 161
aaaatgaatg taaatattac tgcggtgcta ttgaaatctc tttttgacca tatcgttgct    60
tttctcggtc tccttttttct ttctccaatt ttattagtaa cagctattct tattcgtgtt   120
aagatgcctg gaggtcctgt tatattcaaa cagaaaagag ttgggcggta tggtagatta   180
tttaccatgt ataaatttcg ttctatgacg gttgggcatt ccggtggttc tgtttctgta   240
aaaggagaaa gccggatcac gccattgggg gccaaattga gaaaatataa gattgatgaa   300
cttccggaac tgtggaatgt gctgatagga gatatgagtt tggtcggtcc tcgtcctgat   360
gttccgggat atgctgacaa tttgctggga gacgatagga gaatgttgct tttaaaacca   420
ggtattactg gacctgccag tttgaaatat cgtaatgaag aagaattgct ggcagggcag   480
gataatcctc aaaaatataa tgatgaggtt ttgttccctg ataaagtgcg aataaatata   540
gagtatttgg ataactggtc attttggaat gatattaaaa tcatcgttta taccgttttt   600
gggaaagata tgtag                                                    615

<210> 162
<211> 927
<212> DNA
<213> B.fragilis

<400> 162
gaaccaatcg ttgaaagatg gcaaggtgcc cattatggga cgtataacga tcaacaagac    60
caccgcctgc ttcagttgca agcggaagtt tcactggcat tatgggatgc caaggccaag   120
agggcgaaag ggaaatccga cgaggccaga cggctgaatc aggagcttga caatgtcaag   180
gcccagatca caaggcatta ccagtatgtc tgcgaccatg acagcctggt gacagctaaa   240
agtgtctaca accgctatct tggtttcggg gacgattatc acacccttat gggactgttc   300
agggagcagc ttgcctccta caaggaaaag ataggcaagg aaaaggcggc aagcacctat   360
cgcgggctgg tggccgacta caagaatctg cagcttttcc tcaaagagaa gaggcgcatc   420
gaggatatag ccatcgccga gcttgacaag aagttcatcg aggactatta caactggatg   480
ctcgggacat gcgccctggc gagttcaacg gctttcggcc ggggcaacac cctgaaatgg   540
ctgatgtata ccgcccagga aagaggctgg ataaggcttc atccgttcat cggtttcgac   600
tgcctgtccg aatacaagtg gcgttctttc ctcaccgagg aggacttgca aagcgtcatc   660
catgtcaagt tgaattacaa gcgccagcgg gctatccgtg acatgttcct gttcatgtgc   720
tttacaggtc tggcgtacgc ggatctgaag gagatcacgt acaagaatat ccatacggat   780
tccgagggtg gtacatggct gataggcaac cgtataaaaa ccgacgtggc ctatgtggtg   840
aagctgcttc ctatcaccat cgaactggtc gagaggtaca gggggacaat gaaaagaaaa   900
gttcgcctga caaggtgttt tccgtag                                       927

<210> 163
<211> 249
<212> DNA
<213> B.fragilis

<400> 163
aatattttat taataaaaag agattccaaa gatctactta ataaaattca ttcactatta    60
ttattaatta aaaacaatag agaaacatct tttcacctta taaaccctaa attaataaac   120
aaattaacta tctttgtaga tattaccaaa attattaatc tatatgaaac aacatctttt   180
aaaagaaata gaactaggta ccaaaagcgc tcttctcaaa aagaaaatta ttacacatta   240
tatatataa                                                           249

<210> 164
<211> 573
<212> DNA
<213> B.fragilis

<400> 164
atcatgcaat tattaaaaaa aagaatccta caggacggaa aatgttatga gggggggaatt    60
```

```
ctcaaagtag acagtttcat caaccaccag atggacccag tgctaatgaa gtcaattggc    120
gtagaattcg tacgtctctt tgcagggaca aacgtcaata agatcatgac cattgaagcc    180
agcggaatag ctccggccat aatgacggga tatttaatgg acttgccggt cgttttttgcc   240
aaaaaaaaat cgcccagaac aattcagaat gcgctaagta ccacagtaca ctctttcacc    300
aaagaccgtg attatgaagt agtcatcagt tccgacttcc tcactccgaa agataacgta    360
ttattcgtcg atgattttttt agcttatgga aacgccgctt taggtgtcat tgatttgatc   420
aaacagtccg gtgcaaatct ggttggaatg ggattcatca ttgaaaaagc atttcaaaat    480
gggcgtaaaa cacttgaaga aagaggagta agagtagagt ctcttgccat catcgaagat    540
ttatccaatt gccggattac aataaaagat taa                                 573
```

```
<210> 165
<211> 204
<212> DNA
<213> B.fragilis
```

```
<400> 165
gacattttttt ccaacagtct ttccacacag gcagtttttcc aaggcgagga tgaagctgga    60
tttgccagtg ccgtacgagc cgatgaggca aaacgaatga atgccactgg caaagtgatt    120
gataatttttg ccgatggtct ggcgagcatt ggcagtgacg atatagtggg gtatcttgcc    180
aaagtcacgc tctatgttga ttga                                           204
```

```
<210> 166
<211> 372
<212> DNA
<213> B.fragilis
```

```
<400> 166
tattttgcat cgtttttattt ttttagggat aagatatatt ttattttctt tcttagaact    60
tatgaaggaa tacccaagag ggcgattgaa ccggaattca gttcatttcg gaatagttat    120
aaatcggagg agcataataa gtttcaagaa ctggttaaga aatatggttt ctatcctgag    180
ttgtgcgata cctgtagaaa agggaatcta ctgaagataa aatcaaaaag gcggtttttat    240
aagtcactct gtgggggcat gacccgcgat ttgcttataa aaccgttttt cgtttataaa    300
ggcttaagtt tcaactcgat ttgtgtaact gaacccgggc gtacggtacg tcctgcagac    360
catatttcat aa                                                       372
```

```
<210> 167
<211> 1008
<212> DNA
<213> B.fragilis
```

```
<400> 167
ataaataaat caatcatggt aaaaataatc ttaggtgttc tgtcactgct tgtcatgttg     60
tcgtgcagca ctgccgtgaa agagaacact acacaacccg atataatgga gacaaacaag    120
aaaaatctcg gaaatctgtt ggcactctat cccaaaccaa tgacggttgt cggggcggag    180
gtcgaaggga aagtaaactg gcttgtggta ggacacacgg gagtcatcgg ccatgaccgg    240
atactggtca gcatgagtaa aagtcattat accaatcaag gtgttaaaaa atcaaaacga    300
ctttccgtca atcttgtgag tcgtgagatg ttaccgaaag ctgactatgt aggaagtgta    360
agtggtgcga cggtcgataa gtcggaggtg tttgcttacc atatcggaga gaacgatacg    420
cccgttatag acgcatcacc actcacgatg gagtgtgaag tggtggacat ttatgaaacc    480
gacggtttcg acaatttcat ttgcgcgata gtcaatacat acgctgcttc cgatgtgctt    540
gacagcgatg gcaaactcga ctatacgaaa ctaaaacccg tattattcga gttcccgacc    600
tactcctacc ttgcgacagg agagatcatc ggcaaatgtc tgaatccgga taagccgggt    660
atgtgcgtta aagagccgat gacgaccgat ggtatcgtac ggctgtcgaa aatagaggtt    720
tatccgcagt atcttgacga gtatatgaac tatgcaaccg aggtaggtga aatctccctg    780
cgtaccgaac cgggcgtact gacgatgtat gctgtcggcg aaaaggagaa tccctgtaaa    840
gtaacgattc tcgaaaccta tgcgagccgt gaagcatacg agcagcatat cgcttcggaa    900
cactttcaga agtacaagca gggaacgttg catatggtca aatcgttggt attgtccgac    960
cagacaccgc tcaatccggc caacaaactc aataacttca tgcaatag                1008
```

<210> 168
<211> 1248
<212> DNA
<213> B.fragilis

<400> 168
aagaaagaat caatgaataa ggaaatagac ataaaagaca tggcacccgt gaaggcctcg   60
gaacgccatg tcatcctcga tgctctaaga ggatttgcat tgctggtaat ctgctttgcc   120
aactttccgg aattctcgct ttacactttt caaaaaccgg aaattacgga ggctatgcct   180
acggcggaaa tagataaggt aattcgcttt cctcaatacc ttttcgtgga tggtaagttc   240
tacaccatat tctcgctgct gttcggtatc ggattttcaa tcattatcag caacgcggcc   300
aaaaagggaa cggacggatt ccgtatcttt taccggcgga tgattgttct ggccgccatt   360
ggttttctgc atctgatgtt tatctggagt ggggacatct tgttgttgta tgccttattg   420
ggcatgttgc tccctctttt ccggcatgtt tcggacagag tgttgctggg gacttccgct   480
gtcttattgc tacttcctat tctgattgat tggttggccg gtacattcgg agtgtcccgg   540
tcgtctcccg cagtgcgaat gcaacagcac tattgcaatt tatatggtat aacggaatat   600
aacttcggaa tctggctacg cgacgcggaa aactacggag gggtctttca attcctggta   660
caaggtgcat gggtgcgctt gcaggaattt atcgacggca atcgctattt taaggtattg   720
ggattgttct tattgggctt ctacatcgga cgaaagcaaa tatacgccga tcttgaggcc   780
aatcgggtac tactgaaaaa aacggtgaca tacggttttc tgctgggact tcccctatcc   840
gttctctatg cctggagtgc ggtaaacggg catcctttcg gaacggctgc acacaccgcc   900
atctatacgg caagtgtcta tcctttaggt tttgcatacg tttccgctat ctgtcttctg   960
tacctgcatg gtagagagtg gcgcttgtgg cgctgtcttg ccgctccggg gagaatggca   1020
ctgactaatt acgtgggaca gtcggtatgg ggcatggttc tcttctacgg tatcggcttc   1080
ggactggggg ccggcattgg attgacagga acagaatcca tagctttcta cgtctttctt   1140
gtccagatgg cattcagtgc cttatggctc tcctatttcc gctttgggcc tctggaatgg   1200
ggctggcgga tgctgactta tgggaagtgg ttaaaaataa ggaaataa   1248

<210> 169
<211> 228
<212> DNA
<213> B.fragilis

<400> 169
gccgtttgtc cgttgttgga agttctgccc cacaacctgt cagtatggtt cctgtcagga   60
aacacttttg taggatatgc cgaccagcat cctttggtca gcgtgataga ttacgatacc   120
gtcacgccca tcttgcatac gcacagccaa ttttcagtct atgcacttta taaagggatg   180
ggcgttactc ttctctccgg acttgttgca tggaactccg ttgggtaa   228

<210> 170
<211> 237
<212> DNA
<213> B.fragilis

<400> 170
attacgatac cgtcacgccc atcttgcata cgcacagcca attttcagtc tatgcacttt   60
ataaagggat gggcgttact cttctctccg gacttgttgc atggaactcc gttgggtaat   120
cacatcaaag acttctcttt cttttcttat cagtccaatg aagccggaga gcacatccgt   180
tgtcatatca tcgatatggc caaaagtaaa cttatcaacg gagaacaaat catgtag   237

<210> 171
<211> 627
<212> DNA
<213> B.fragilis

<400> 171
attttaaaac caacaagaaa tatggaaata accaatgctg aatttgtaat tagtaatacg   60
gacgtgaaaa aatgtccggc aggcactttc cccgaatatg cctttatcgg ccgatccaat   120
gtaggaaaat ccagcctcat caatatgctg accggacgaa aggggctggc catgacttcc   180

```
gctactcccg gtaagaccat gcttatcaat cattttctga tcaacaacag ctggtacctg    240
gttgacttac ccggatacgg atatgccaga cgaggtcaga aaggacagga acagatacgc    300
accatcatcg aagattacat cctcgaacgc gaacagatga ccaatctatt cgtattgata    360
gacagccgtc tggaacccca gaaaatagat cttgaattca tggaatggct gggtgagaac    420
ggcattcctt ttgccattat cttcaccaaa gcagacaaac tgaaaggggg acgactcaaa    480
ataaatatca gcgcttactt gagagaatta cggaaacaat gggaagaact ccctccctat    540
ttcatcactt catcagaaga gcgccttggc aggacagagg tattaaacta catcaagtca    600
atcaataaag aacttaattc aaaataa    627


<210> 172
<211> 528
<212> DNA
<213> B.fragilis


<400> 172
aaaaataaaa cgatgcaaaa tatcattatt acatttattg cctttttttgt actcagatta    60
ctttccttat cctactccat tcgtaacgag aaacgtcttc tgaaaagtgg agcggtacaa    120
tatggtaaag ttaattcgct attactgaca ttagcacata tcgtctacta ttttttcggcc    180
ctctatgaag catacacttc gggaactacc ttcaactact tctctgtttg tggtgttttt    240
ataatgggct ttgcttatgc tatgctattc tatgtgatct ataaactcca tgatgtatgg    300
acagtaaaac tttatatcat tcccgatcat cgcattgaaa aaagcttcct tttcagaaca    360
gtaagacacc ccaattacta tctgaatatc atacctgaac taattggaat tgctttactc    420
tgcaatgcct ggtatacatt actcattgga ctccctatct acgcttgttt gctcgctata    480
cgtatccgac aagaggaaag ggccatgaaa gaactattgg agaattaa    528


<210> 173
<211> 1488
<212> DNA
<213> B.fragilis


<400> 173
aactctggga cgagaaaact tgtttcacag actaatgccc ttgtacataa cctgatggga    60
acaggaaagg gaaagacaga ttacctgcta tcgcttatcc gcgaagggaa gcagatgaca    120
ctggggcagc agttgcgcct gactgcatac ctcagtgtcc ctgccattat ggcacagata    180
tcttccatcg ccatgcagta tattgatgcc tcgatggtgg gcagcctggg cgcgaatgcc    240
gctgcttcca tcggattggt ctcgaccacg acatggctgt tttgggagct gtgtgcagcc    300
gccgcaacgg gcttctccgt tcaagtagcg cataaaatcg gagccgggga tttcgtggga    360
gcacgaaaga tactccgcca gtcgattgct gccacattgg tttttcagctc attgttggcg    420
gctgtcggca tttccatcag tggtatgctt cccggctggt tgggcggtga tgaagtaata    480
cggagcgatt catccctcta cttttggata ttcgcacttt ccttcctgc cttgcagttg    540
aatttccttg cgggtggcat gttgcgatgc agtggaaata tgcgtgtgcc cagtatgctg    600
aacgtgctga tgtgtcttct ggatatcgtg ttcaacttct tcctgatttt cccttcgagg    660
caggtggaat ggttcggagt gacatttacc actcccggcg caggcttggg cgtggaaggc    720
gcaatattgg gaacggtgct ggccgagctc atcactgccg gcgggatgat gtggtatctt    780
tgccgtcgct cgcccatgct gagactgtcc ggagaacggg gaagtttcct gcctcggaaa    840
gagacactga gtaaggcttt ccgcatctcc ctgccgatgg gattcgagca catggccatt    900
tgtggggcgc agatcgcaac gacggtgatt gtcgcaccac ttggtatcat tgccattgcc    960
gccaactcgt tcgccatcac tgccgaaagt ctctgctata tgcccggcta cggtatctcg    1020
gaggctgcca cgacgttggt cggccagagc ctcggagcaa accgtatccg gttgctccgt    1080
cgttttgcca atattaccgt ctggtcggga atgctgatta tgggtgtcat gggaacgctg    1140
atgtatatgg cggctccgca aatcatagga gtgatgaccc cggtagagga aattcgcacg    1200
ttgggaatcg agattctgcg gatagaagcc tttgcagagc cgatgttcgc ggcgtctatc    1260
gtagcctacg gtatattcgt gggtgtgggt aatacattcg tacccagtct gatgaacttc    1320
ggcagcattt ggggcgtacg gctgacactg gcggcatggc tcgcccccac gatgggacta    1380
cgcggcgtgt ggtttgccat gtgcatcgag ctttgtttcc gggggtaat cttcctcgcg    1440
agactttggg gcagtaactg gatttataaa ttacgaataa atagataa    1488


<210> 174
<211> 1083
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<212> DNA
<213> B.fragilis

<400> 174

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aataatacgg ctatgaagtt acaagcaatc gccatactga cattcctgac tttttgcgaat    60
gtcatggcac aagaaacgac aacaacaaaa tatataaatt caaccgatat ggaagcattg   120
aaattgacgc aggaatggga taagacctttt ccgcagagcg ataaggtgga acatacgaaa   180
atcacgtttc acaaccgtta cggtattacg cttgccgcag acctttacaa gccgaaaaat   240
acacaaggac gtctggcagc cattgccgtc agtggcccctt acggtgcggt gaaagaacaa   300
gtgtcaggcc gttatgccca gacacttgcc gaacgaggct ttctgaccat tgctttcgat   360
ccctcctatt acggcgaaag tggtggtaca cctcgctatc ttacgtcacc cgaaatcagc   420
acggaggatt tcagcgcggc agtcgattat ctgacatccc gtgcggacgt cgatccggaa   480
cgtatcggaa tcttaggcat ctgcggttgg ggcgggtttg cacttaatgc tgcggccaat   540
gaccctcgta tcaaagcgac ggtaacatcc actatgtatg atatgagccg ggtaaatgcc   600
aacgggtatt tcgacgccat gagctccgat gaccgttaca aattgcgcga acaactcaac   660
gcacagcgta ctgaggatta tcgtgatgac agctatgtac gcgatggtgg cgtacttgac   720
cccgtaacgg acgatactcc gcaattcgtc aaggagtatc acgactacta caagacggaa   780
cgaggctacc atcgccgttc accgaactcc aacgagggaa tcacgaaaac aagcgtattg   840
gcattcatca atatgccgct gctcacctat atcagcgaaa tccgcagtgc cgtgttgatg   900
attcatggag aaaaagctca ttcccgctat ttcagtgagg atgcctacaa acggctgacg   960
ggtagtaaca aggaactgtt gattatacccc ggagccaacc atgtcgattt gtacgataat  1020
ctcaacgtga ttccgttcga caagatagat gctttcttta agaatgcctt aaaggagaaa  1080
tag                                                                 1083
```

<210> 175
<211> 642
<212> DNA
<213> B.fragilis

<400> 175

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ttaaatagat atacttgttt gtacatgaat caacaatatc catcgacgtt acttgaaaag    60
gccgtcggag agtttttctaa attgccgggt atcggacgga aaacagctat gagactggtg   120
cttcacctgt tgcgtcagga tacctctgtg gtggaagctt tcggaagttc tattataact   180
ttaaagcatg aggtgaaata ttgcaaggtg tgtcataata tatctgatac ggaaacttgt   240
cagatttgtg caaatccgca gcgggacgcg tctatggtct gcgtagtgga gaatatacgg   300
gatgtgatgg ccgtagaggc cactcaacaa tatcgtgggt tgtaccatgt tttggggggga   360
gtgatttcac cgatggatgg ggtaggaccg ggcgatctgc agatagaaag tctggtgcgc   420
cgggtagccg aaggggggaat aaatgaagtg attcttgctc taagcacaac catggaaggg   480
gataccacga atttttatat ttaccgtaaa cttgagaaaa tgggtgtcaa attgagcgta   540
cttgcccgtg gggtatccat tggtgacgag ctggaataca cagacgagat aacgttgggt   600
agaagtattg tgaaccgtac gactttttacc ggtaccgttt aa                      642
```

<210> 176
<211> 1167
<212> DNA
<213> B.fragilis

<400> 176

```
gttatgagat acgatttcga tacgattgtc ccgcgtcgcg ggacgaactc ctacaaatgg    60
gacactcccg aagagaaaaa tgtgctacct atgtgggtag cggatatgga tttccgtacg   120
gcacctgcca ttgtagaagc cttgcaaagg cgggttgcac acggtatttt cggttatacc   180
aaagtacccg aaacctatta cgatgcggtc gtccggtggt tcgagagccg tcatcgctgg   240
cagatagatc cccggtggat tatctataca agcggtgtcg taccggctct gtcggccatt   300
atcaaagccc tgaccgcacc gggcgataaa gtaattgtcc aaactccggc atacaactgc   360
ttctattcgt cgattcgcaa cgacggatgc gagctatcgg ccaataatct aatttatcgg   420
gacggtcgct atatgataga cttcgacgac ctcgcagcga aagcggctga tccgaaggcg   480
aaaatcctgt tactatgtaa tcctcacaat ccggtcgggc gggtctggac accggaagaa   540
ctgcggcata tcggcgacat ctgtttgcgc aacggagtgt ttgttgtggc agatgaaatt   600
cattgcgaac tgacctacga gggacacgac tatacgcctt ttgcctccct ctccgaacgc   660
```

```
ttccaacaaa attccgtgac ttgcatttcg ccaagcaagg cgttcaacct tgccggactg    720
caaatcgcca atatcatcgc cttggacgaa gaggtgcgtc gccgcatcga ccgtgctatt    780
aacatcaacg aggtgtgcga cgtcaatcca ttcggcgtga tcgctacaat tgccgcttat    840
aatgagggtg gcgagtggct cgatgctttg cgaaaatacc tgcgagggaa ttatgaatat    900
ctatgccatt ttttcgccga aaggctgcct caatatcccg tattgccgct cgaaggaact    960
tatttggtct ggatagactg ccgagcactc ggtatcggtt cggacgccac gaccctgcat   1020
ctgcaagagc agcagaagct gatggtcaac tccggtacga tgtacggacc cagtggagag   1080
ggattcatcc gtctgaacat tgcctgtccc cgcacattac ttgccgatgg tctggagcgg   1140
atggcccgtg tattggaatg ctgttaa                                       1167
```

<210> 177
<211> 615
<212> DNA
<213> B.fragilis

<400> 177
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aaacaaggat atcaaatgaa aagaaaacta ttatcatttg cagttcttat cacactactg     60
cttgtaccga ccgtaaaccg tgcacaatct atcaaggact tattcaataa agacaatatc    120
tccaaagttg tcaacgctgt cacaggacat accgaaacag tggatatgac cgggacctgg    180
cgttataccg gctcagccat tgagttcgag tctgaaaacc tgctgaagaa agccggagga    240
accgtcgctg cttccgctgc cgaacaaaag ctggacgaac agctggccaa agtcggcatt    300
aaagaggggc aactgagttt tacattcaat gcggacagta ctttcgtaag cactttaggc    360
aaacgcaagc tgaacggaac atactcttac gatgccggca cccagatgct ccacctgagg    420
tatatgaaat taatccccat gaatgcaaaa gtcaattata ccactcagca gatggatctt    480
ctgttcgaag cagacaaatt gctgaagcta atcactttct tatccagtaa gagcagcagt    540
gccaccctca aagccatcag ttcattggca gatagctatg acggcatgat gctgggatat    600
gaattgaaac gatga                                                     615
```

<210> 178
<211> 330
<212> DNA
<213> B.fragilis

<400> 178
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aaacaatatc aaaaatttgt cacaattctt gtactattag ccggcattgt ccctgtctat     60
gccatcatga acatcgtatt cgatcctaat gacgatggaa atctgttaat aacactcggc    120
actctgacac ctatactggg tgaccttttg atggtatatg ccttcaaaga caaatatcaa    180
attttaatta gcaatcatcg tttgcaaaat aagtgttacc tttgcgctcg ttatgatgat    240
acttgccact attgtatgct actttgccat tctcttgctg atagcccgta tcaccggacg    300
gaaaggaggt tcgaatgcag cgttttttaa                                     330
```

<210> 179
<211> 540
<212> DNA
<213> B.fragilis

<400> 179
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atgatgaagc aatctttctt agccaacgag cgaatatatc tccgtgcagt ggaaccggag     60
gatttggatc ttatgtacga aatggaaaat gatccttcta tgtgggatat cagtagtttc    120
acagttccct attcgcgttt tgtactcaaa cagtatattg aaggatcgca aagtgacatg    180
tttgccgata aacagttgcg gctgatgatt atgcgtcgga aagataattg tactttgggt    240
acggtcgata taactgattt tgtaccttta cattcaagag gggcagtcgg aattgccgtt    300
cacagcaatt atagacagga ggggtatgct tccgatgcat tgaaactgct ttgtgaatat    360
gctttcaact tttttatttat aaaacaattg tatgcccata tagctgtgga taatgaaccc    420
agtttgcgat tgttcaattc ttgtggattt acccaatgtg gagtattgaa agaatggctg    480
ttaacacacg aaggttataa agatgccgtg cttgtgcaat gtatgaatcc caaacgatga    540
```

<210> 180
<211> 450

<212> DNA
<213> B.fragilis

<400> 180
```
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attattccgt tattgttggt gctattggga gaagccggcg tgttgcctgt aggaataaaa   120
gcagacaatg tacgggctgt ttatgttttc gaaacagtag gtattttgat gactgccgtc   180
tgtatacctc tttctcttaa actatttagt tttgttctga caaagaaaat agatcagctg   240
acgtttccgg tggccctgag ccgttatatg ctttgggggg ctgttcggct ggctttactg   300
gaatttgtag tggtgtttaa tctggccggt tactacttta cacttagtag tacaggtgcg   360
ttatgtgcac ttataggact gacagcctct ttttctgtc ttccgggaga aaaaagattg   420
cgtgccgaac tgcatattga taaagaataa                                     450
```

<210> 181
<211> 213
<212> DNA
<213> B.fragilis

<400> 181
```
cacagagtta aagcttgttc tttggatgtg aataagaagt tctttaaatg caaaagactt    60
gttatttgcg cacaagaacc tgacaacctg caaaaggcgt taacaatgtt aattgaaaaa   120
aggtacaagg atgaagatac cggttcagac ggcgtaaact cacttccgaa acttaagtta   180
tcttattcag cctgtgtcta tttttttctta taa                                213
```

<210> 182
<211> 693
<212> DNA
<213> B.fragilis

<400> 182
```
ataaaaacca agaatatgag accatatata atcagtcaca tgatgacttc ggtcgatggc    60
cgcatcgact gcccgatggt cgggcaactg agtacggatg agtattacat agccttggaa   120
aagctggggc cttgctcgaa actgtcagga cggataacta ccgcactcga atgttctgcc   180
gtcaaagagg aaagtactcc gatggaggga actccgatag gtcataaatc cgtatatgtc   240
gccagtaaat cggacgaata tacgatcatt gtcgatacct atgggaaact gcgttggcag   300
gagggtgaag ctgacggtca tcctctactt tgtattgtca gtgaacaggt gtccgaggaa   360
tatctggaaa cgctgcgcac attgggtatt tcatggattg cggccggtgc ggaacgcatt   420
gacttgccgc aagctatgga gctgcttcac gaacatttcg gcgttgaacg cttggcgatt   480
gtcggggggcg gacatatctg cggcggtttc ctggaggccg gactgattga cgaagtgagt   540
attatggtag ctccgggtat tgacgggcgt aagggacaga cggcggtttt cgatggaatc   600
tcccgtatgg aatgtaaccc gtacaaactg aaattagaga gtgtggaaca atgggaaaca   660
ggtattgtct ggctccgcta taaagtaaaa taa                                 693
```

<210> 183
<211> 1221
<212> DNA
<213> B.fragilis

<400> 183
```
aatataacaa aaatgaaaat atatatattt attatactgg ctgcggccac ttcaatctcc    60
ctgatatctt gcgattcgaa acagagtgac acccgctcgg cctcttcctc agaggttcac   120
cggaatgacg acggtcatga tcatcgggaa agtgatggag acaaccatag tgaaatagag   180
aactccggca agggacatga ggacgaaatc attttcactc ggcaacaggc ggaagctatc   240
gggttggaga tatataatgt ggtacccgga tcttttgcac aggtaatcag aaccagcgga   300
cagatacagg cagcccaagg agatgaagaa actattgtcg ccacgaccaa tggtgtcgta   360
tcttttcccg gacaaaacat catcgaagga gcaactgttg gcgtgggaag tactattgta   420
accatttcag ctaaaaatct ttatgaagga gatccggtgg caaaagccaa gattgcctat   480
gaaactgcct tgaaagagta tcagcgtgca gaaggtctgg taaaggataa gattatttcc   540
gctaaagagt tcgaacagac tcgtatgaaa tatgaaaatg ccagaactgc ttatgaagcc   600
```

```
caagctgcca atgtaactgt ttccggggta aaagttactt ctcccatcag tggatatgtc      660
aaaaacaggc tggtgagtca gggggaatac gtgactgtcg gacagcctgt tgctacaatt      720
tccaagaacc ggagattgca actgcgagcc gatgtttcag aaaactattt caatgaactt      780
aaaaaaatca ggggagccaa cttcatggta tcctacaata acaaggttta taggttggaa      840
gatcttcacg ggcgtttatt atcctttggc aaagccgctg ctgaatcttc tttctatatc      900
ccgattactt ttgaattcga taatatcggt gatttcattc ccggttctta tgtagaggta      960
tacctgctca ccactccca aaataatgta ttttccattc ctgttactgc attgacggaa       1020
gaacagggta tctattttgt ctacctgcaa atagcagagg aggagttcgt gaagcgtgaa      1080
gtcggtatcg agagagtga cggtaaaaac gtgagaatac tttctggctt gaaagagggt       1140
gagagagtgg tcgttaaagg tgcttatcag gtaaagctgg cttctagttc atcggtgttg      1200
cccgaagggc atagtcatta a                                                1221
```

<210> 184
<211> 372
<212> DNA
<213> B.fragilis

<400> 184

```
ataacgaaaa aagaaattgg atatggaaaa attaccatca atagcattag caacgacaac      60
cgtcagacct tgccgcgttt ccagccggaa gcgatgcgtg cgaatacccg cattgtaaat      120
gcgctgcaag ctttcgggcg tacacggagc atgacctcgg cacaggtggc tcttggctgg      180
ttgcttcaga aagcaccgtg gattgtaccg attccgggaa cgacaaaact gtctcatctg      240
gaggaaaacc tgcgcacact cgacttcaac atcagctccg gggagtggaa agagttagag      300
gatgccgtgg ctgctattcc cgttgtggga gaccggtaca atgcggaaca gcaacgtcag      360
gtaggccgat aa                                                          372
```

<210> 185
<211> 1140
<212> DNA
<213> B.fragilis

<400> 185

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aagattatgg atcgcagaaa tttcttaagg acggcatcaa gttttgcact actcgcggcc      60
ggagctacaa cgggtgtttc ccgtgtgttt accgaacccc ctatctcttc tttatcagga      120
aatttatctg ataaaaatac gccaaatgcg ggcgatacga tggagtatcg caagctcgga      180
gagctggacg tatcggctat tggtctgggt tgtctgccaa tggtgggata ttacggtggg      240
aagtacgaca aaaaggatat gatcgctctg attcgccggg catacgacaa aggtgtcact      300
tttttcgata cggcggaggt ttatggccct tacatcagcg aagagtgggt cggcgaagca      360
ctcgctccgt ttcgcgacaa agtgaaaatc ggaacgaagt tcggcttcgg tgtcgaggag      420
aaacaaccga ctgctatcaa tagccgtccc gatcatattc gttgggcggt ggagggctct      480
ttgaaacgcc tgcgtactga ccatatcgac ctcttgtatc aacaccgtgt cgatccgaaa      540
gtgccgatgg aagaggtggc cggaactgtc aaggatttga tgcaggaggg caaagtgctg      600
cattgggggc tgtcggaagc gagtgccagt tccatccgtc gggcgcatgc cgtctgcccg      660
ctttccgccg tgcagagcga gtatgccatt tggtggcggg agcctgaaac caaaatcttc      720
ccgacattgg aaaaactcgg tatcggcttc gtgccttatt gtccgctggg gcgtgcgttt      780
ctcactggga taatcaatga aaacagccgt ttctacgagg gagaccggcg ttggaacttg      840
ccgcaattca cgcccgaagc tttgaagcac aatatgccgc ttatcgcctt ggttcgcaaa      900
tgggccgagc gcaagggagt gacactcgcg caattcgctt tgctatggat gttatctcgc      960
aaatcgtgga ttgctccgat acccggaacg accaatccgg cacacttgga tgacctgctc      1020
ggtgcgggaa cggtccgtct ctcagcttgg gagatggagg agtttgataa ggagtatgcc      1080
aaaatcgatt tgatggggca tcgtgccgat ccgttcaccg aaagtcaaat agataaataa      1140
```

<210> 186
<211> 678
<212> DNA
<213> B.fragilis

<400> 186

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tctatcacgc tgaccaaagg atgctggtcg gcatatccta caaaagtgtt tcctgacagg      60
```

```
aaccatactg acaggttgtg gggcagaact tccaacaacg gacaaacggc tcaaacggcc        120
gatacactgc ctgccattct ccgtgtcgtg ctgaacaacg ggatagagat gccgcagttg        180
ggtgttggca cgtctactct caaggagact gccgcagagt gtgtgaaaca cgccatcgga        240
ctgggatacc gtttggtcga tgtggcgcaa ggctacgaca acgaggccga agtgtggtac        300
ggaatcaagg aaagcggtat cggccggagt gaagtgttca ttatttcgaa agtctctccc        360
gatgccgtgc gtagcggaaa ggtacgcgag tcgctcgacc ggactattga agcattcggg        420
ggaacgtatg ttgacctgat gctgattcat tggccggtag ctagaaaggt caaggagaga        480
tggagaatca tggaaaagta tgtcgatgtg gggaagatcc gtgccatcgg ggtgagcaac        540
ttcaatccgc atcatgtgga cgaattgctg gcatacgctc gtatcaagcc tgtcgtcaac        600
cagatcaaga ttcatcccta catggaacat caggaggtcg tgggcaacac ttttgccaaa        660
ggtattcaag ttcagtga                                                      678
```

```
<210> 187
<211> 1029
<212> DNA
<213> B.fragilis
```

```
<400> 187
aaaaataata gtatggataa aaggaaatta ggacagctgg aagtatctcc gataggaatg         60
ggatgtatgg gattcagcca cggttacggg caagtgccac ccgaagcgta tgccatagaa        120
gccatccgcg gggcatacga ctacggctgc acgcatttcg atacggcgga agcctatggc        180
aaagaacaat tctacgccgg acataacgag gaattggtgg gtaaggcgat tgaaccgttc        240
cgtaagaagg tggtgctcgc caccaaattt catattggtg aactctcgaa accggacgag        300
acgaatctct accgggaggt acgccggcat cttgaagatt ccatgagcag acttcgtacg        360
gattatatcg acctgtatta cctgcaccgt atcagtgagg cagtccggct tgaggatgtg        420
gcaaccgtca tgggacggct tattcaggaa ggactgatac gtggttgggg attgtcgcaa        480
gtatcggccg accagatacg ggcggcacat aagattactc cattatccgc cgtccagaac        540
atctattcga tggtggaacg cgattgcgaa acggagattt ttccggtatg ccttgaaaaa        600
ggaatcggag tcgtaccgtt ctcgccgatt gcaagcggat tcctttcggg caaggtaacg        660
ccacaggatc agttcggctt cgatgacgtg cggaaattcg tcccccaatt atcgaaagag        720
aatatcgagg ccaaccagcc catactcgat ttgctgcatc ggttcgctgt ggagaaacat        780
gctaccaacg cccagatatc gcttgcgtgg atgctccata aatatcccaa tgtcgtacct        840
attcccggtt ccaagaatca ggaaaggatt ctggagaatc tgggagcttg gaatgtcacg        900
ctttccgatg atgaattccg gcagctacaa tcagcgttgg atgaatgtaa ggtacacgga        960
catcgtgggt gtgtggaaac ggaacagacg agtttcggta aacaatggag tgaagaaaca       1020
gataagtga                                                               1029
```

```
<210> 188
<211> 879
<212> DNA
<213> B.fragilis
```

```
<400> 188
aataaggaaa gtatgaaagt aatatcaaat gcagaattcg gaggtgaaag accttttgttc        60
gaatcacatg acttacgttt ggagaatgta attatccgtg ccggagaatc agccatcaag        120
gaatgcagca acatcgaagc cgttgattgc cggttcgagg gaaattatcc cttctggcac        180
gtgcacggtt tcgttatcga ccgttgtttc ttcgatgtcg gcgggcgttc ggctctgtgg        240
tactccgata atctgaaaat gacgaacaca cgtatcgacg cccccaagat gttccgcgag        300
atgcacgaca tcgaaatcga gaacgtagag ataaacgatg ccgacgaagt gttctggcgt        360
tgcaagaatt tggacatcaa aaatctgaaa ctgcatggcg gcacttatcc gttcatgttc        420
agcagcaata tccgcataga cggattggag agtgacagta aatacgtatt ccagtacgtg        480
aagaatgtgg aactgcgcaa tgccaaaatc accacgaaag atgccttttg ggaagtggag        540
aatgtgacaa tctacgattc agaactcaac ggtgaatatt tgggttggca ttcgcacaac        600
cttcggttgg tgaactgtca tattaccggc gagcagccgc tctgctatgc ccacgacctc        660
gtattggaaa attgtacgtt cggccccgac tgcgaccggg ctttcgagta cagttcggtg        720
caggcgacca tcaaaggcgc aataggtggg gtgaagaatc cgcgaacggg ctgtatcacc        780
gccgagagct acggggagat tatcctcgac gagaatatca aggctcccgc cgattgcaag        840
ctgaaactct gggacgagaa aacttgtttc acagactaa                               879
```

<210> 189
<211> 864
<212> DNA
<213> B.fragilis

<400> 189
cgatattatg gtatggattt caaagaattg aataacggag taaagatgcc gatacaaggc   60
tttggtgtct ttcagatacc cgatgccacc gagtgcgaaa gagttgttac cgatgcgctt   120
gccgtcggct atcggctcat cgacaccgct tcggtctatg gaaatgaacg ggcggtcggt   180
atggctattc ggaaaagtgg tattccgcgt gaggaactgt tcatcacgac caaagcatgg   240
atttcagaaa tgggttatga acggacattg cgagcattag acacttcgct cgcccgtttg   300
ggattggatt acctcgacct ctatctgatc cacatgcctt cggcgacta ttacggagca   360
tggcgggcta tggaaaaact ttatgcgaaa ggacgtgtgc gggctatcgg ggtatgcaat   420
ttcgagccgg acagattgct ggatttatgc cataatgcta atgttattcc ggcggtcaat   480
cagatagagg tgcatcctta tactccgcaa accgatgcga tacggaccat gcaggaactc   540
ggcatacaag cagaggcatg ggggcctttg gccgaaggac ggaatggatt gttcacggac   600
gatattctga ccggtatcgc tcgcaaatat gataaatcgg cagcacaggt cgtactgcgc   660
tggcacttac agcgcggagt tgtcgccatt cccaaatcgg tacatcggca gcggatgcaa   720
gagaatttca acatcgggga tttcatgctg acaccggagg atatggccgc aattgcttcc   780
atgaatatgg gatacgatat gattctcgac ctacacgctc cggaagaagt acagcgactc   840
tatggtattg agtgtcctgc atga   864

<210> 190
<211> 684
<212> DNA
<213> B.fragilis

<400> 190
ttggagatta tgataaaagc aattggattg actaagatat tccgtacaga gagtgtacag   60
actattgcat tgaatgaaat cagtatcaat atatcggaag gcgaatttgt agctataatg   120
ggaccctcag gatgtggcaa atcgaccttg ctgaatatac tgggactatt ggacaatccg   180
acttccggtg agttgtggtt catcggtaaa gaagtttccc gctactcgga aaatgatcgt   240
acagacatgc ggaacggcaa tatcggcttt gtatttcaga gctttaacct gatagatgaa   300
ctgactgtat ttgagaatgt agaattaccg ttgctatatg ccggtgtgcc ggttcgtgag   360
cgtgtagatc gagtgaacaa agcgttagaa aggatgcaga taagccatcg tacggagcat   420
tatcctcaac aactttccgg aggtcaacaa cagcgtgtgg ctattgcccg ggctattgtg   480
acgaacccga aaattatatt ggctgacgaa ccgacgggta acctcgattc taccaatggc   540
aacgaggtga tgcttttatt gaaggagtta aataaagatg gagctacagt cgtgatggta   600
actcactctg aagaaaatgc ccaggaggca ggccgtattg tgcggatgat ggatggttgt   660
atcctgacgg agaacagacg atga   684

<210> 191
<211> 1368
<212> DNA
<213> B.fragilis

<400> 191
gtagattata tctatctttg tgacacaatt tataaagcaa caaaaagaaa catgaaagat   60
acacctatca aacggcatct aattgatgaa actatcgaag aattt caaat tacagatttc   120
tcaaaagcaa ccattcgtga agtaaaagcc atagcagcta aagcagaaac agcatccgga   180
gtcgaattta taaaaatgga aatgggcgta ccgggtctcc ccccttctac tgtaggagta   240
aaagccgaga tagaagcatt gcaaaatgga atagccagtt tgtatcccga tattaatgga   300
ctaccggaac taaaatcgga agcctccaaa tttataaaag catttatcga tatagatctc   360
aaaccggaag gttgcgtacc tgtcacggga tccatgcaag gtactttcgc atctttcctt   420
acttgcagtc aatgcgatga aaaaaaagat actattctgt tcatagatcc tggctttccg   480
gtccaaaagc agcaattggt ggtcatggga cagaagtacg agacatttga tgtatacgat   540
tatcggggag acaaattaaa agaaaaactc gagagctacc tgaaaaaagg aaatatttca   600
gctgttatat actcaaatcc gaataacccc agctggatct gtttaaaaga tgaagaactg   660
aaaatcatcg gtgaactagc cacccaatat gatgtaatcg tccttgaaga tttagcttat   720

```
tttgccatgg acttccgcca agatctgagt actccgtatc atgcacctta tcagccttcg    780
gtggcacact atacagataa ttatattttg cttatatccg gttccaaagc cttcagttat    840
gcaggccaac gtattggtgt cagctgtatt tctgataaat tataccatcg ccattatccc    900
ggattcgata aacgctacgg aggcggtact tttggcactg tatttatcca tcgtgtgctt    960
tatgccctct cttcagggac gagccattcg gcacaattcg ccatggcagc tatgctgaaa   1020
gcagcgaacg aaggtaaata caatttcctg aacgaagtga ggatatatgg tgaacgcgcc   1080
cgtaaattga aagaaatatt cttgcgttac ggattccatc tggtatacga caaagatctt   1140
gaagatcctg ttgccgacgg tttctatttc accataggct atccgggaat gacaagtgga   1200
gagctggcaa aagagttgat gtattatggg gtcagtgcaa ttttccttggt tactacaggt   1260
agccaacaac agggactacg tgcatgcact tcctttatca aagagcacca atatgctcaa   1320
ctggatgaaa gaatgaagtt atttgccgaa aatcatccta tatcttaa              1368
```

```
<210> 192
<211> 1497
<212> DNA
<213> B.fragilis
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<400> 192
ttagcaatca tcgtttgcaa aataagtgtt acctttgcgc tcgttatgat gatacttgcc     60
actattgtat gctactttgc cattctcttg ctgatagccc gtatcaccgg acggaaagga    120
ggttcgaatg cagcgttttt taaaggagaa aaccagtctc catggtacgt cgttgctttc    180
ggaatgattg gcgcatctat ttcgggagta acctttgtat ccgtaccggg catggtaaag    240
gcgatggata tgacgtatat gcaaaccgta ttcggctttt tcttcggtta tctggctgtc    300
gcccatatac tcctcccact ctactataaa ctcaacctga ccagtatata cacttatctg    360
gatacccgta tcggaaagcg tgcctaccgt acaggagcct ctttttttcct tctttcgcgt    420
atgctgggca cagctgcaaa actatacctt gtctgtctga ttctatatac ctacgtattt    480
cgtgatatgg gtatcccatt ctggagtatt gctgccggat cggtagcttt agtatggata    540
tacactcaca aaagtggcat taaaacaatt gtctggacgg atactttaca gactttctgc    600
ctgatcgccg cactgatcag catccttgtt tttgtcactg caaagttaaa tcttgacttc    660
agcggagtta tacaaacaat cagcagcaat gaacacagtc gcatctttgt atttgatgac    720
tggatgtcgc gccagaattt cttcaaacag tttctaagtg ggatttttat tgttattgtc    780
atgaccggac tcgatcagga tatgatgcag aaaaacctttt cctgccgtag tctgcgtgac    840
gcgcagaaga acatgtattg ttatggcttt gcattcgctc cgctcaacct gctgtttctg    900
ggccttggca ttttattact ggtccttgct caagagatgc agttggaact tccggctgcc    960
ggtgacgaca tcctgccgct gtttgctacc cagggttatc tgggcgaagg agtacttatc   1020
ctatttacaa tcggtatcat tgccgccgct ttcagcaatt cggattcagc cttaaccgcc   1080
atgacaacga gcttttgcat cgacttgctc gacacaggca aagacacaga ggaagaagcc   1140
cgtagaaaac gaaaccgggt acatatagga ctatccgtcc tacttatttt ctttatctgc   1200
cttgtcgatg cattgaataa ccaaagcgtc atcgatgcta tttacatcat agcctcctat   1260
acatacggac ctcttctggg aatgtttgct ttcggattat tcacccaacg aaaaacaaac   1320
gaccgatggg tgccgtttat tgcgatagct tcaccactga tttgttacgc agccgataga   1380
tttgcccggc aggaaaccgg ctatcagttc ggatacgaat tattgatgct gaacggcatc   1440
cttacttttg caggaatatg gatcgtatca aagaaacaac taaaaaatga attttaa      1497
```

```
<210> 193
<211> 426
<212> DNA
<213> B.fragilis
```

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<400> 193
tatcccacca ttggcagaca acccagacca atagccgata cgtccagctc tccgagcttg     60
cgatactcca tcgtatcgcc cgcatttggc gtattttttat cagataaatt tcctgataaa    120
gaagagatag ggggttcggt aaacacacgg gaaacacccg ttgtagctcc ggccgcgagt    180
agtgcaaaac ttgatgccgt ccttaagaaa tttctgcgat ccataatctt ctattttttc    240
attgttcatt ttatgattgc aaatttaccg cgattgaata agtcggcttg tatacgattt    300
acggatattt atacccgaat cctcgaaata gtgcatgagc tcagatttcc ttcgatacaa    360
tatttcagtt ttctttttaa gaagataatg gggcttgctc ctaatgaata tcggttaata    420
aattaa                                                                426
```

<210> 194
<211> 495
<212> DNA
<213> B.fragilis

<400> 194
```
cattgtaaca tgtttgcaac ttggttgcaa gaaatatact ctattttttgt cccgaaagta    60
aaaaccaaac agatgaagcg tatctttttc gtatatccac ttgccatagc gacactattc   120
ttaatagtgc tttccgctat tccgcatcac catcataaag agatgatgtg tacggtgatg   180
gaattatgtg aacaagacga tatctacaat gatgggcata cggatcatga ggcggggcaa   240
gatgcacata atgaaaacac ctgtgtatca caagctggtt atatttttcc ttccagcgtt   300
gataaaagta atctgcatga tggaagcctg atgaatatcc acttgccggt tctatatctg   360
tttgctgaca ttctgactat tcatttcgat ataccaatct ctgaaaacac atacgatagg   420
tatgttgtct cttatacgtc cgtagtgctg ggtgagagca gcggattgcg tgctcctccc   480
tattttttct cttaa                                                    495
```

<210> 195
<211> 600
<212> DNA
<213> B.fragilis

<400> 195
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attaggggca tgaacatcaa tactgacata tttaagatac aatcgaataa tgtaatgccg    60
tcgagaggaa agattctgat atcagagcct ttcctccacg atgtaacttt cggaaggtca   120
gtagtattgc ttgttgatca tactgaagaa ggaagtatgg gattgattat aaataaacca   180
ctcccattga tgctcaatga tatcattaaa gaatttaaat atatagaaga tattccgtta   240
cacaaaggag gtcctatcgg aactgacact ttgtttttatc tgcatacttt acacgaaata   300
cccggaaccc ttccgatcaa caatggatta tatctcaacg gagatttcga tgctatcaag   360
aaatacattt tacaaggaaa ccctataaaa ggaaagatac gcttttttcct cggatattcc   420
ggctgggaat gcgaacaact gattcaggaa ataaaggaga atacctggat tatttcaaaa   480
gaagaaaata cctatttaat gaatgaagat ataaaaggta tgtggaagga agccttaggg   540
aaattgggca gcaagtatga aacctggtcc cgcttcccac aagttccttc tttaaactaa   600
```

<210> 196
<211> 228
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (10),(11),(13),(14),(15)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 196
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tgcactggtn ntnnnaatag cgccaccgtc ggatccttcc agccccgtgg tgaagactat    60
cttttttatgt atcactggct ggatgagttt gcttaccgga ctactatgag ctggtggctg   120
tttttggggg gcggactgat tattgcgggg attacgttat taactgttat cggacaaacc   180
tggcggacgg cttcacagaa tccggtgaga tcattgagat atgaataa              228
```

<210> 197
<211> 249
<212> DNA
<213> B.fragilis

<400> 197
```
aatccatgct ttggtcgtga tgaacagttc ctcacgcgga ataccacttt tccgaatagc    60
cataccgacc gcccgttcat ttccatagac cgaagcggtg tcgatgagcc gatagccgac   120
ggcaagcgca tcggtaacaa ctctttcgca ctcggtggca tcgggtatct gaaagacacc   180
aaagccttgt atcggcatct ttactccgtt attcaattct ttgaaatcca taccataata   240
```

tcgttataa   249

<210> 198
<211> 423
<212> DNA
<213> B.fragilis

<400> 198
aaaactaaat ttatggactt aaaaaagaca actttctact tatttacgct cttttagtttg   60
atgttaattt cctgtagcaa cgatgatgaa aacaaaaatg atgcgcaggt aacagttact   120
gtagtcagtg ctgatggcaa acctctgccc aacgaaattg tgcaaatgtt cgatgaaaag   180
acttatgaag agttcaaaaa agacaatcga acaactccta cggcatatgc attaactaac   240
tccaccggag ttgccacttt cattttttact tatgataagt ggttcgaatc aaacaaagac   300
cgattttttca ctttcgctgt ccaatatggc agtggtacag aaaattatga aatatggtct   360
gcaggacgta ccgtacgccc gggttcagtt acacaaatcg agttgaaact taagcccttta   420
taa   423

<210> 199
<211> 186
<212> DNA
<213> B.fragilis

<400> 199
acttcatcat cagatatttt attttttaaat tttataagaa gtacatgtgt gtttttcata   60
tcatttgtaa ttgttatggt tgtaatgata gcaatattcg gtaataaaaa gcagaaaagc   120
aagaaaatcg atgtttatttt tcttgctttt ttacatgggg acgattcttg tcacggtata   180
ccgtga   186

<210> 200
<211> 384
<212> DNA
<213> B.fragilis

<400> 200
gtgaaagagt cggtacgcat ttttagattt gccgtaattg gtacgctcaa tgcattaatc   60
acagcttttg ttatttggtt gatgatggat gaattgtcat acgattacat tccggccaat   120
attacagcgt acatagtagc ccaaaattcat aactttatttt ggagtaaaata ttggatctttt   180
ccgattgaaa ataaaaagaa caacatttgg aagcagatgt tgtttttctg ttctgctttc   240
ggattggcat atagtgccca gttcttgttt ttagtcacac ttgtagagtg tggagatgta   300
aacgagtatc tggcacaatt cctggggctg tttatctacg gaacagtaaa cttcatcgtt   360
aataagaagc ttacattcag ataa   384

<210> 201
<211> 3177
<212> DNA
<213> B.fragilis

<400> 201
aagtcaagcc cgtatcagtc aatcacgagt caccaacctc taatcgttaa ctgcatgttt   60
tcaaagttct ttatcaatcg acctatattc gccacggtac tggcattgat catcgtggtg   120
gccggattgg taacattaaa tatattgcct gtcgcacagt ttccggagat aactccgcct   180
acagtacagg tatctgcctt ctatccgggg gcaaatgctg agaccgtagc ccagactgtc   240
ggcattccca tagaacagca agtaaatggc gtagacggta tgctgtatat gagctctaca   300
gcgtccagct cgggtgccta ttcgttgacc attacttttg ctgtcggtac agacatagat   360
atggccactg tacaagttca aaaccgggta agcgtagcac aatcttcgtt accggaacct   420
gtcatcgttc agggagtaac ggtacagaag caatcgtcca atattgtgat gtttctcacg   480
atgcaggcac aagactctgt atacgacggg ctttacctta cgaactacgc tcagttgaat   540
ctggttgacc aattgacacg tgtacccggc gtaggggctg tcaatgtaat gggagcgggc   600
aattacagca tgcgcgtctg gctcgatccg gaagcaatgc gcatccgtaa cctctcgccg   660

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gcacaaatct atcaggctat ccagtcacaa aacatagagg tcagtgccgg ttatatcgga    720
cagcctattg gcaaaaacaa caataatgcc tatcagtata ccttgaatgt acaaggtcgc    780
ctgacgtctc ccgaagagtt cggcaacatt attatccgaa ctgaagaagg agggaaaatg    840
ctccggctaa aagatgtggc gcgcatcgac ctcggcagtt cttcgtacaa cgtagtgtcc    900
aaactaaagg gacaccctac tgctgccatc gctatctatc aacaaccggg ttcgaactcg    960
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ggagtcagct ataacgtgac cttggatacg accgatgtca tcaatgcatc cattgatgaa   1080
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ctggagacag gacagtattc tcccaaagaa gccgtcacca aagcaatggg agaaatcaca   1380
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gacctgatta aggagcaact gggtaacgag tttggctacg aatggacctc ggtagcctat   2640
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gaagccgggc atgtccggct gcgtccgatc ctgatgacct cttttgcatt cgtattggga   3000
gtgatgcctc ttctgttcgc cacaggggcc ggggcgcaaa gccgtatcgc actcggcgca   3060
gctgttgttt tcggtatggc cctgaacacg ttactggcaa cgatatatat cccgaatttc   3120
tacgagctga tgcaaaagtt ccaggaaaac atattggatc gcaagaaaaa gaaatag      3177
```

<210> 202
<211> 450
<212> DNA
<213> B.fragilis

<400> 202

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atgttatcgt taaacctacc agtatttgac actaaaatcg ccactcgaaa tggaaaaaat     60
gttattttcg atgtgattcg ccgtcgttat gtcgcattga cccctgaaga atgggtccgt    120
cagcactttg tacactttct tattgttcat aaggggtatc cgtcgtcttt gatggcaaat    180
gaagtgctgc tgaacctgaa cgggactaaa aaacgatgtg acacagtgct atataaacgc    240
gatcttagtg ccagaatgat tgttgaatat aaagctcccc acattgagat tacgcaggct    300
gttttttgatc agatcacccg ctataatatg gtttttgaaag ttgattatct ggttgtcagt   360
aatgggatgc aacactattg ttgccggatg gattatgata ctcaaagtta ttcgtttctg    420
tcggatattc cggattatga cgctttataa                                      450
```

<210> 203

<211> 426
<212> DNA
<213> B.fragilis

<400> 203
```
agactcaaac caatgaaggc attttttaccg ttacttctct cttttttcTT tattattttca      60
tgccagcaac acaaagaagc tactatatct cctatcgatg aagaagatga attgcaggaa     120
gaggccgata gccttccccg tgcgacagcc attttttggc ttgataaata tcatatgaaa     180
gagctgaaaa aggacgatgt gcttactttc cgtacggcta aggctaaagt catcattcgg     240
aatgatggga caatcgagct tctgtcgttt gtggaacaac agcctgggaa tgcacaacga     300
tatatccgtt accgactgaa agatttcaag gttaagaaaa tcttgatgga taacggctat     360
atcaatccgg gtgaacaata cgtccaactc cgttatatac ctgcacttgc aaggcgcgtt     420
aaatag                                                                426
```

<210> 204
<211> 1062
<212> DNA
<213> B.fragilis

<400> 204
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atgatggaac caacttgcat gagcgaaaac aagaaaaaaa taatattcat cgttaatcca      60
atttcgggta cacaaagtaa ggaacttgtt ctgagtctac tggatgaaaa gatagataag     120
gaaatgtata cttgggaaat tgtgtatacc gaaagggccg gacatgcaat cgaaatagca     180
gcagatgcgg cagataaaaa tacagatata gtagttgctg taggaggaga cggaacaatt     240
aatgaaattg cccgttcatt ggtacacacc aatacagcat gggaattat cccttgcggc      300
tctggaaacg gattagcacg acatcttcaa atttcaatgg atccgcgtaa agcacttgaa     360
attttgaatg atgggataat cgatatcata gattacggaa aaataaatgg cacagacttt     420
ttttgtactt gcggagtagg gtttgacgct tttgtaagtc tgaaatttgc taatgccggc     480
aaacgtggac tgctgactta tctagagaaa accctgcagg aaagtctaaa gtatcaacct     540
gaaacttatg aattggaaac agaagacggt acttccaaat ataaagcctt tctcattgct     600
tgcggcaacg cttctcaata cgggaacaat gcttatatag ccccacaggc cactctgaca     660
gatggtttgt tagatgtaac cattctcgaa ccgtttacgg tattagatgt tccggcacta     720
gcctttcagc tcttcaataa aacaattgac caaaacagtc gcattaaaac tttccgttgc     780
aaaaagttat gtattcatcg cagttcgccg ggtgttgtcc attttgacgg cgatccgatg     840
caggctgacg aagatatcaa aatagaactg attcagaaag gactgcgggt cgttgtacct     900
ggtgataaaa aaaaagataa tcccaacgta ttacaaaaag cacaagaata cgtaaacggt     960
attaaattga taaacgaagc tatagtagaa gatatagcac ataaaaataa agttattctg    1020
aagaagaata agcagctgat acaaaaactt actaaaaaat ag                       1062
```

<210> 205
<211> 951
<212> DNA
<213> B.fragilis

<400> 205
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atgattatgc ctaaaaacta tactttacaa aacgcctcca atttaggttg gctattctat      60
aaagactatt atagacaaga accgaatgta gatttcattt ctacacaagg aaaagaaagt     120
gatacaactg ctgattttttt cagaaaaacc aatcagagaa tcactgctta tcaattaaat     180
tccgaatcac cattagttgc agcattcaac aaccattttg gtacaccgtt gcaactaaaa     240
accatttatc cgggtttaat aacaggtagc ggacttccgc atcagacagg tagtaaagga     300
gaatttaaat taggatttca atttgattat actaccggac ttccctatat tcccggatca     360
tctatcaaag gaactttgcg cagtatgttt ccttttttcat tgaaagataa aggctctact     420
aaacgtattc taccggaata tagaaaagaa cgtatggaat atatccgaga cttaataata     480
gaagtaacca atataaatga aatttcagac acagaaattc aggcattaga atatgccata     540
ttcactaaca gtactccatc tggcaaaacg atagaattct ctcttgaaga aaaagatgtc     600
ttctatgatg cttttgttgc agattcaaag gatggagtaa tgttaagcga tgactatatt     660
actcctcatg gcgagaatcc attaaaagat cccaaaccta ttttgttctt aaagatcaga     720
cctgatgtaa caataaactt ttatttcaaa ttgtgtacta ctcacttata caaagaaaag     780
gtatgtagtt caaaacaaat agaagagatt aaaaaacaaa atgatttctc ttcttcggac     840
```

```
tacaaaatga ttacggcaca ccagaagcga aacctatttg agaaaattct cctttgtatc    900
ggaatcggag ctaaaaccaa tataggatac ggacaattaa agaaactcta a             951
```

<210> 206
<211> 282
<212> DNA
<213> B.fragilis

<400> 206
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ggggagaagt tcagacataa cggcttggat aagatcgtca tggacttcgg tattgctttt    60
aacattggga aaatgatcaa taagcaggaa aagaagaaga gaggcagaac taatttattg    120
gtaactattt taataagctg tggaatagct taccaaaaat acacaaaggc gataatacta    180
cggggctgtc caaaaagcaa agtgcccccc aaaagtcgga tagccccttt taccattgtt    240
tatttcggtg aaaagcctca tattaccgtt gtgaaaaatt aa                       282
```

<210> 207
<211> 405
<212> DNA
<213> B.fragilis

<400> 207
```
ttaatcgata ctatcaggaa tatgcacatc agccacattg ccatctggac tacccgttta    60
gaggaactta gaaatttcta tatcacttat ttcaacggaa caagtaatga aaagtatatc    120
aatcctaaaa aaggatttga atcttatttc atcagttttg atcagggatt tgcttctctg    180
gaaattatgc aaagagaaga tatcacaaca cctgcattaa aagactgcct cgggttagct    240
cattttttcct tttctgtcgg tagcaaagaa gctgtattgg aactcacaga acaactccgt    300
aaggatggtt ttgttatcga gagtgagcca cgaaccaccg gagacggcta ttttgaaagt    360
gctattcttg atcctgaagg aaacatagta gaaatcacta tttaa                    405
```

<210> 208
<211> 711
<212> DNA
<213> B.fragilis

<400> 208
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ttaagagtaa cattggatag ggttatcgaa gataaagagt tagggcgttt ggttgtacgc    60
gataatgtgc gtgcaaaacg gcttgttttt cgtacgaaag cggatgctat ttacattagt    120
atacctctgg gagttacgat gcgagaggta aaagaggcaa tagagaagtt gcgtccccga    180
ttactggatt ccaggcagaa gttggtgcgc cctttgattg acctgaacta tcggattgag    240
acagaatact tcaaattatc actggttagt ggtaaacgag agaggttttt ggcacattca    300
gagttgggag agatgcggat tatctgtcct ccaacagctg attttacaga ctcgaatttg    360
caggattggc ttcgaaaagt gattgaagaa gctttgcgac ggaatgcaaa gattatcttg    420
cctccccggt tgtatatgct ttcagagaag caccgtttac cctacgagag cgtgcagata    480
aattcgagcc gtgggcgatg gggaagctgt tcctctcgta aaaagataaa tctctcttat    540
ttccttgtat tgttgccaaa acatctgata gattacgtcc ttttgcatga actttgccat    600
acttgcgaga tgaatcatgg agatcgcttt tgggacttgc taaatgggct taccgatggg    660
aaagcattgg aactacgcga agagttgaag aggtacaaga ctgagatctg a             711
```

<210> 209
<211> 249
<212> DNA
<213> B.fragilis

<400> 209
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ccgttaaaaa caaatcggag tatgagaaat ttttttgtaa gtgcctttttt attattagtc    60
ggtattgccg ttatgactgt ttgccgaatg aataataagc aatgtttgag tgaattggct    120
ttagtgaatg ttgaagcgct tgctacaggt gaaggagatg ttcctacaag ttgttatggc    180
agtggtaatg tagattgccc tataagcgat agcaaagttt cctatgttat gaatgggcgc    240
agttttttga                                                           249
```

<210> 210
<211> 1506
<212> DNA
<213> B.fragilis

<400> 210
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catagtcgaa cagataaaac tattagaatt atgatatata gttatcacat attttatttt      60
ccatttaaat gggaaattat gggattagaa aatcaagcat tttctgacca agttaatttg     120
gacaacattc aatataaccg gaattcttat tgggaacgct cacaaaagcc agatcctgga     180
gaagaggagt cattatataa cgaaaagaac tattattata catttgtaca caatatatta     240
tatgatgaag agcacagtcc attaaatcta attcaccatt tcgaacgcaa agaacctaag     300
ctaagtaatc acatttacta ttatataaag aaaaaagggc gtaataatcc atataaactc     360
attgtagacg cgatgaatat taatctatat gctacaggtg tcggattctt gtcattttat     420
ctaaaaaatg aagattgcac tcaaaacagc ccggaagaca tattggctat caatcaatat     480
gggcgccgta tcatgcccccc cttttttcaat gatacaagac tacgaaatga gatttcagaa     540
tacattcgga tagaaggttt aaatcaaaca gtttattttg aagatttcaa atcatatact     600
ccctatgaca gctggcagcc ttcctcgtcc ataaaaaagc taatttgtga attagttacc     660
aatttatcaa ttgaccctat tatagatgat cgtatgtttg tggcaacatg gtacaaaaac     720
aatcagctat ctcaacaatt tacaaataat gcgaaagctt actttgatag ccaggatcca     780
ttttcagatt actggtatcg ttttctgttt atagatggaa gtaatgccac ttgccaaaat     840
gagaaaatga aaaaagaact attggaggaa catacctatt atcgttggca acaatggagt     900
tcactttatg gtatcagtaa atattcatta gtatacctta ctaataatga agtacccgat     960
tacctgatag aatattttca aacgatctat gcacgtatgg ccgaactagt attagttcaa    1020
cgtgcttcca tgttaagatt ttccggagaa atcactaaag taagccaatt atccaatcag    1080
gatgtagaag ccgtatctaa acgggttagt tctttatata aagaatatat tcgtttcgta    1140
aatcaaatct atttccgtga gattacagct caagaccaag gaatcgaaat gtacaacaag    1200
cttcactctt gcttgcaaat ggaaagttat ataaaggatt tagatggaga aatagaagaa    1260
ctgcatcaat acatttcttt aatggaagat cgggagcgaa acaaaaaagc aagtttgctt    1320
aatgatattg ctactttatt tttacccatt acagtaatta ccggttttttg gggaatgaat    1380
caaatcagtg aagtgatgga agaaaatgga gaactctcga ccggctttat cattcaatct    1440
ctattattaa taataggtac actttgtgcc atatgtataa tctataaaag aaaaagaaaa    1500
ctatga                                                              1506
```

<210> 211
<211> 798
<212> DNA
<213> B.fragilis

<400> 211
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tatatgggaa ctattgatat atcttacttt aatctgctta tagggctact gttattggta      60
atcccacttt tttatctttg gaagttcaaa accggattac tgaaagccac cctgataggg     120
acagcacgca tgatcgtgca actcttcctg ataggtatgt acctgaaata ccttttcctg     180
tggaataacc catggattaa cttcctgtgg gttatcatca tgattttttgt agccggacaa     240
acagctttgg tacgtacagg acttaaacgt gaaatactcc tgatccctat atcagtaggt     300
ttcctctgta gcgttgtgct ggtgggcatg tactttattg gcattgtatt acaactggat     360
aatgtattca gcgcccagta ttttattccc attttcggaa tcttaatggg aaatatgtta     420
tcaagcaacg tgattgcctt gaacacttat tatagtggat tgaaacgtga acagcaattg     480
tactgttacc tgttgggcaa tggtgccact cgtcaggaag cacaggcacc attccatacgg     540
gaagcgatta tcaaatcttt cagcccactg attgccaata tcgcggttat gggattagta     600
gcacttccag gcacgatgat cgggcaaatt ttgggaggca gcagtccgaa cgttgccata     660
aaatatcaaa tgatgattat ggtcattact ttcacagcct ctatgttatc attaatgatc     720
accatctcgc tggcatcccg taaatcgttc gatgaatacg gacgtatttt gcaagtaacc     780
aaagaatctc aaaagtag                                                  798
```

<210> 212
<211> 2004
<212> DNA
<213> B.fragilis

<400> 212
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gaatatatga ctgtaaaaga aaaaatagaa caactccgtc tccaactcca tcagcataat    60
tacaattatt atgtgctgaa tgccccggaa atctcagata aagaattcga cgatttaatg   120
agggaacttc aggacctgga acaggaacat ccggaatata aagacgaaaa ctcgcctact   180
atgcgtgtag gtagcgatat caataagaat tttacccaag tagcgcacaa atatccgatg   240
ctttcattgt cgaatacata ttcggagaat gaagtaaccg acttctatga cagagtgcgt   300
aaagctttga atgaagattt tgagatttgt tgcgagatga agtatgatgg tacctctatc   360
tctttaactt acgaaaatgg taaactgatc cgcgcggtaa cccgcggtga cggtgaaaaa   420
ggggacgatg taacagacaa cgtaaagacc attcggagta ttcctctcgt cctacatgga   480
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gaagcattaa accgggaaaa agaggcccgc gaagaacctc tctttgcaaa tccgagaaat   600
gccgcatcgg gaacattgaa attacaaaat tccgccatcg tggcttcccg taagctggat   660
gcctatctct attatctgct tggcgataat ctgccgactg acggacatta tgaaaatctg   720
caggaagcag ccaaatgggg atttaagatt tccccgttaa tgcgtaagtg ccagacacta   780
caagaagtct tcgactttat caactattgg gacgtagagc gcaaaaacct gaacgttgct   840
acagacggaa tcgtactgaa agtaaacagc ctcaagcagc aaaggaatct tgggttcaca   900
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ttgaacatgg taacctatca ggtagggaga accggcgccg taacaccggt agccaatctc  1020
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cattattgtc cgaatgagac cgcctgtcca ccacaaatca aaggaaaaat agagcacttc  1320
atcagccgga aagcaatgaa tatagacgga ttaggacctg aaaccatcga catgttctac  1380
cgtttaggac tgattcgtga cacggccgac ctctatcaac tgacgacaga tgacatcaga  1440
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aaagaggtac cttttgaaag agtaattttt gcattaggta ttcgttttgt aggcgaaacg  1560
gtagctaaaa aaatagccaa atcttttaaa gacatagaag agttggaaaa tgcagatctg  1620
gaaactctga tcaatatcga tgaaatcggt gaaaaaatag ctcggagtat ccttaactac  1680
tttgcgaatg aatcaaatcg taaattggtg gaccgattaa aaacagcagg attgcaacta  1740
tacagacctg aagaagactt gagcggacat accgataaat tggccggaca atccattgtc  1800
atcagtggag tattcaccca ccattcaaga gatgaataca aggatcttat cgaaaaacac  1860
ggtggcaaga acgtgggaag catctcttct aaaaccagtt ttattctggc cggagacaat  1920
atgggacctg cgaaattaga aaaagcaagt aaactgggaa ttaaaataat gaacgaagag  1980
gaatttttaa agcttatatc gtaa                                        2004
```

<210> 213
<211> 609
<212> DNA
<213> B.fragilis

<400> 213
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atctatcttg caaagttagt caaaattcat aatatgtgcg ggatttcttt tatctttgtg    60
tcactaatta atgaacgaga tatgatactg aacgaacgag acagtcgcca cgaacatgta   120
ttaaatgtgg cacggcagat gatgactgct gcccgtacgg cccctaaggg aaaaggaatt   180
gacatcatag aaaactgcaat tgttaccggt gaagaaatac agcaactctc ggatacgttg   240
aaagccatgt tcgaagagtt tggtatgaaa ttcttttttgc gggatgcaga taatattctt   300
caggctgagt gtatcttatt aataggtacg cgtgagcaag ctcaaggatt gaattgcggt   360
cattgtggat atgctacatg ttccggacgt tctgaaggtg tcccctgtgc gttgaatagc   420
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acccgtgtca tgttctcagc cggattggct gcccaacgtc ttgagtggtt gaaaggatgt   540
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cctaagtaa                                                           609
```

<210> 214
<211> 1815
<212> DNA
<213> B.fragilis

<400> 214

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aacaataacg ccatgaaata cattgcaatc actttaggac caattacccg tacaatcgaa   60
atggctgaaa gcactaaaga gctttgggca gccagttatt tcttctctta tcttgctaaa  120
aaaatagtag aaccattcgt gaaaaagaat cgtacctttc agctacctct tattaatgaa  180
gagatgcaaa agccccattg tggtgccggt ttgtttcctg atcgatatat ctttaagtct  240
gagcctgaag atttggagct gcttaaacaa cactcagatc aggtattaat agaaatagcc  300
ggtcatatag cttctcctag cttgccgggc acagctaaag atgtatctca aatatatcac  360
tatttaaaat catatattaa aatatatttt attgaacgca cattagagtc ggacgatcct  420
catgtagtaa ttccggcttg tgaaaaatac cttaatatta ttgagaatca agaaacattt  480
cctgagcagg aagaaaccat gatatcccat caaaaaagcg atttcttaaa attttaata   540
accaacgtca acggtaaaat atatcgaaaa gacaaaaatt caattcctcg ttttactgga  600
tcttttctca caagagatgc atttggtgat atgaacggag aaagattgtt tgagtccatc  660
cttgaaatat cagcatccga attaaacata aacatccaac aaaaagcatt agaagtaatt  720
acagcaaacg aaaaaaacaa aggtgaaaaa tatagcgatc agatctggga tgcggaagaa  780
attatcctaa acgacaacaa agcacaactt agaccatatc ataaatatat tgctattatt  840
aagtcagatg gtgattcaat gggggaaact ataaaaagca tgggagcgta caacatccct  900
ataacccaac ttagtaaagc tttactaagc ttcaacatcg aatctattaa cgaaatcgta  960
gcttatggag gaaagccaat attcattggt ggagatgatt tactatgttt tgcacctgta 1020
tgttgcaatg gtaataatgt attcaatctt gtcgaaaaac tgagtacttg ttttgaccaa 1080
tgcataaatc aacacttaca gcaatacatc aacgcttgtt cagaagctca gaggccttta 1140
ccaagtctgt catttggcat ttcaattact tatcataaat atcccatgtt tgaagcattg 1200
catacaacgg actatttatt agagatggtg gccaaagata acttgtttaa atatacatta 1260
agcaataaaa atatacttaa tgaaaacatg aagcgtttca ttcttaaaaa taaattagct 1320
ttctctttac aaaaacatag tggacaaatc tatcataccg caatgtctaa gaaaggaaaa 1380
agctatgtaa agtttaatat gttacttcaa aagtacatac tgaaaaacaa agatatgagc 1440
aagacgcagg aatcagaaaa gttcctctca tctgtcatcc aaatgatcag agcacatgct 1500
gaaatattac aaatcattct tcagaatgag gacaagcgaa ctgaaatgtt aaagaactat 1560
ttcgataata actttaatga gtcttgtcac ctaggttaca ccggtttatt cgaagatatc 1620
caaacgcttc tttgccttag atatcaagaa aacattcaag attatcaaaa tagaaatgaa 1680
attatccagc aaaacacgat tctgacatca gatgaaaaag aaatattaat agtttctcct 1740
gccatggatg ctatccatac gattttcaca gctttacaat ttattcactt cataaattat 1800
aataaagatg aatag                                                 1815
```

<210> 215
<211> 918
<212> DNA
<213> B.fragilis

<400> 215

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actattatgg cagatttaag tgtaaacatt ggtaaactac aaatgaagaa cccggtaatg   60
acagcttcgg gtacatttgg atatggtgag gaatttgcgg attttattga tataacgcga  120
ataggcggta tcattgtaaa gggtactact cttcacaaac gtgaaggtaa cccgtatccc  180
cgcatggcag agaccccttc cggtatgtta aacgctgtag gactgcaaaa taagggtgta  240
gaatatttct caaatcacat ttatccccgt atcaaagaca ttcagaccca catgattgtg  300
aatgtttccg gatcagccat tgaagactat gtaaagactg cagagatcat taatgaactt  360
gacaaaattc ctgctatcga attaaacatc tcttgtccta atgtaaaaca aggaggtatg  420
gcatttgggg tgacaactaa aggagtatca gaagttgtac aagcagtgcg ttctgcttac  480
aaaaagacac ttatcgtcaa gctatctccc aacgttacag atatagcaga aatggcacgg  540
gcagccgagg ccaacggcgc cgatagtgta tcattaatca atacattgct gggaatggcc  600
atcgatgctg agcgcaaacg ccccatcctt tcaacagtga caggcggcat gtccggtgca  660
gcagtaaaac ccatcgcact aagaatggtg tggcaagttg ctaaagcagt aaatattccg  720
gtcataggac taggcggtat catgaattgg aaagatgctg tcgagttcat gcttgcaggt  780
gcttcagcca tacagattgg tacggcaaat ttcatagatc cggctatcac catcaaagtt  840
atagatggta taaacgatta cctggaaaga cacggatgca agtctgttcc tgaaattata  900
ggtgcacttg aggtatag                                               918
```

<210> 216
<211> 1296

<212> DNA
<213> B.fragilis

<400> 216

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tatgacatgg caaaaataca aattaaatct gagaaactca cacctttygg aggaattttt    60
tcaatcatgg agaaatttga ctccatgctt tcacccgtta tcgactcaac actgggtcag   120
agatgcagca gtatcttcgg atatcagttc agcgagatag tccgttcgct gatgagcgtt   180
tatttctgtg gcggctcatg cgtggaagat gtaacgtcac aactgatgcg ccatctctcg   240
tatcatccta cccttcgtac atgcagctct gataccatcc tcagagccat caaggaactg   300
acacaggaaa acatctccta tacttccgac caaggcaaga cctatgattt caatactgca   360
gacaaactca acacattgct tataaacgct ttggtttcta caggcgagtt gaaggaaatt   420
gaggaatacg atgttgactt tgaccatcag ttccttgaaa cggagaagta tgatgcaaaa   480
ccgacctaca aaaagttcct cggctacagg cctggcgtat atgttatcgg tgacaagata   540
gtctatatcg agaacagcga tggtaacacg aatgtgcgtt ttcatcaggc agacacccat   600
aagagattct cgctcttct ggaatcccag aacatccgtg taaatcgctt cagggcagac   660
tgcggttcct gctcgaagga aatcgtcagt gagatagaga agcattgcaa acatttctac   720
atccgtgcca accgatgcag ttcgctctac aatgacatct ttgctctgag aggatggaag   780
acggaggaga ttaacggcat ccagttcgaa ctcaattcca ttctcgttga gaaatgggaa   840
ggcaagtgct atcgtcttgt catccagaga caaagacgca acagtggcga ccttgacctg   900
tgggaaggcg aatacactta ccgttgtatt ctgaccaacg attacaagtc atcgacaagg   960
gacattgttg aattctacaa tctgcgtggc ggcaaggaac gtatctttga cgacatgaac  1020
aacggattcg gttggagcag gctcccccaag tcattcatgg cggagaatac tgtctttctt  1080
ctgcttactg cattgataca caatttctac aagaccatca tgagcaggct tgacaccaag  1140
gcttttgggc tcaagaaaac gagtcgcata aagtcttttg tcttcagatt catctccgta  1200
cctgccaagt ggatcatgac tgcaaggcaa tacgtgctga atatctacac agagaaccga  1260
gcttatgcaa aacccttcaa aacagaattc ggataa                             1296
```

<210> 217
<211> 2286
<212> DNA
<213> B.fragilis

<400> 217

```
atttataatt taaatatgcc cgattattat cattccatta ccaccctcca tgctctacag    60
aatgcatgga gggctgtgcg agccaaaaat gcggcaggag ggattgatgg attcacttta   120
tctcattttg agaagcgttt gaacgataat ttgattgaat tacaacatga acttatttcc   180
caaacatgga atcccgaacc ttacctaaga atagaaatta ctaagaatga aacagaaaaa   240
cgtaaattgg gattattgtg catcaaggac aaaatagtac aacaagccat taaaacagcc   300
attgaacctc agttagagaa aacctttta aatctcagtt acggttaccg ccccaacaaa   360
ggtccggaac gagctatcaa acgggtcgta cacgatttaa agaagttaaa gagtggttat   420
gtagccaaat tggatataga caactatttc gatacgatca atcatgaacg ctttttcact   480
cgtcttgcca attggttaaa agatgatgaa acactcaggc tgatccgcct atgtatccaa   540
acaggaatag ttactccgca actgcaatgg caagaaataa ataaaggagt acctcaagga   600
gctatactat ctcctttatt ggcaaacttt tatcttcacc cttttgatca gtttgctgcc   660
aataaagtcc ctatgtatat acgctacgca gacgattttc taatcgctac atccacagaa   720
aaacaaataa aagaagctgt agaattagta aaagaagaat tggaaagcca atttatttta   780
caactcaata caccgataat acataatttc catgatggga tagaatttct tggaatcaca   840
atctctgata caggtctatc catcacagaa aaaagaaaa agacgttaca agagagaatc   900
aattcaatca aatttataaa atcgtcattg tcctctcaaa gtaaagagac gcttcaaggt   960
ataaaaaatt actatgccaa gttgcttcct gaaagtactt taaaggaatt ggattgcttc  1020
ttaatgaacc gcctcaatgc attgattatc cgaaaccaaa actctattaa taacaaaaaa  1080
gaattagttt cgaatcttca aaaaatagaa ttctattcag aaaatagtaa taaaaataaa  1140
tctcaactga tacaacaatt atgtagtaca tatatcgtac actctacaaa atcaaagact  1200
cggttaacca gtacccatat tgataataca aagctaatca cacaaaaaaa gaaagaatat  1260
cagaaacgtg aaaatgaagg tgcagaatta gtgataagta ttccaggtag ctatataggg  1320
gccacttata aaggaattac ggtaaaatta caaggtaaga ttattaataa accttctcct  1380
gctttgaaac acattacggt agtaggtaag gggataagtc tctcaagcaa tgcaattacg  1440
tattgcatga accacaaaat cccaattgac tttttcgatg gtagaggaaa acaatatggt  1500
actgtactaa atcctgtatt tttggatgta actttgtgga ataaacaagt agaacttcct  1560
```

```
ttggaacaaa aaataaaact tgctactcaa attattatcg gtaaattaaa aaatcaatta    1620
aatctgatta agtattacca taaataccat aaagatattt taggaggaaa gttatctgaa    1680
aaatatgtgg aagttgtatt aaagatagac aagctaatag agaaagctaa aaattattct    1740
cagagaaatg aaaaatatac tgcagaatta atggccattg agtcacaggc tgctatagca    1800
tattggtcgt acatacgagt tttaacagct gatgacggga ttgatttttat ccgccgtgag    1860
caccaaggtg ccaccgattt acttaattct ttattaaact atggctatgc tattctatat    1920
gctcgtgtct ggaaaaatat tcttgcggcc aaactaaatc catccatcgg ggtgcttcat    1980
gcaaagcaag atggcaaacc tactttagta tttgatgttg tggagctatt tcgtgctcaa    2040
atggtagata gagtagtaat tagtcttatt caaaaaaaag tctctttaaa aatgcatgac    2100
ggtctattaa atgaatcatc caaacgagtt ttgatccgat atatattaga gcgactcaat    2160
cggtatgaaa aatatagagg agaagaaata accttctctc aaataatttt aagacaagcc    2220
caagaaatag cactttttat ttctggagac aatttaatat ttaaacctta tgttgcgaaa    2280
tggtaa                                                               2286
```

<210> 218
<211> 219
<212> DNA
<213> B.fragilis

<400> 218
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tcccataatt tcccatttaa atggaaaata aaatatgtga taactatata tcataattct    60
aatagtttta tctgttcgac tatgttaagt atttcatttg ttgttaggcg gttgcgtacg    120
gttccgataa atccattaat accgcctccc caaaagatat tacttattgg ggtgtatcgc    180
tttaatatct tctggataga atttatccct tttccataa                           219
```

<210> 219
<211> 1038
<212> DNA
<213> B.fragilis

<400> 219
```
cgccacactt atatttatat ggccaaacaa gaactgactt gcgatgacat cctcaaagaa    60
ctgagggcca agcaatatcg tcccatctac tatttgatgg gagaagaatc gtattatatc    120
gacttaatag ccgattacat taccgacaac gtactgacgg atactgagaa agagtttaac    180
ctgaccgtag tatatggtgc agatgtggat gtggcgactg tgattaatgc cgctaagcgc    240
tacccgatga tgtcagaaca tcaggtagtg atagtaaaag aggcacaagc catccgcaat    300
atagaagaac tatcttatta cctgcaaaaa ccgttaaact caacaatatt agtggtttgt    360
cataaacatg gcgctctgga ccgcagaaag aagttagctg cagaaattga aaaaacaggt    420
attcttttcg aatccaaaaa gataaaagaa gcacagttgc ctgcatttat cagttcatat    480
atgaaacgta aagggataga catggagcct aaagctaccg caatgttagc tgattttgtg    540
ggtacggatc ttagccgttt gacgggtgaa ctggaaaaac tgatcatcac attacccggc    600
ggtcagaaac gcgtaactcc tgaacaaata gagaaaaaca tagggataag taaagactat    660
aataattttg aattgcgtag tgcactggtc gaaaaggatg tactcaaggc caataaaata    720
ataaaatact ttgaagaaaa tcctaaaaca aatccgatac aaatgacgct ttctttacta    780
ttcaactttt actcaaacct aatgttggcc tactatgcac cggataaatc agaacaggga    840
gtggctacca tgttagggct taaaaccccg tggcaggccc gcgattacct gacggcaatg    900
cggaaataca ctggagtgaa gacaatgcaa attgtaggag aaatacgata tgcagacgca    960
aaatcgaaag gtgtaggcaa tacctcgata agcgatggag atattcttcg tgaattagta    1020
ttcaagattc ttcattaa                                                  1038
```

<210> 220
<211> 2334
<212> DNA
<213> B.fragilis

<400> 220
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tttaaccctc tatatagtgt tttgctggac cttatgaaga aaaatctttt attgttattt    60
cttttttttac tgtttttgcc aatgcttgtc caggcacaga aagtcggatt ggtattgagt    120
ggcggcggtg ctaaaggact gacgcatatt ggaattattc gtgctctaga agagaataat    180
```

```
atcccgatag attatataac cggtacttct atgggagcca ttgtgggctc cctttatgcc     240
atggggtatt cgcctgacga catggaaacc ttactgaaat cagaagattt caagcgatgg     300
tattccggtg aggtggaaga aaaatacatg tactatttta agaagaatct tcccacgccg     360
gagtttttca atatacgctt ttcctttaag gactcgttga gcctgaagcc gcagtttctg     420
ccgaccagtg ttgttaatcc tatccagatg aaccttgtct ttatcgatct gtatgcgcgc     480
gctacggctg catgtgacgg tgactttgat aaactttttg taccatttcg ttgtatcgca     540
tcggatgtgt ataacaagaa gcagctgatt ctgaagcgtg gtgatctggg tgacgccgta     600
cgggcttcta tgagttttcc ctttatgttc aagcctatcg agatagacag catgttggct     660
tacgacggtg gaatctataa taattttcca accgacgtga tgcgtgagga ttttcatccg     720
gacatcatta tcggtagcgt tgtatctact aatccgggaa agccgaaaga gaatgatctg     780
atgagccaga tagaaaatat ggttatgcag aagacagact actctcttcc tgattctgcc     840
ggtattttga tgactttcaa atataatgat gtaagtctga tggacttcca acgcatcgat     900
gagctcgaga aaataggata tgaccgtaca atgagcctga tggactccat caaaagccgt     960
attcaccgta gggttaatgt ggataatatc cgtttaaggc ggttggtgta aaaagcaat    1020
tatcccgaac tcagatttaa gaacatctat atcgacggag ctaatactca ccaacaggtg    1080
tacataaaga aagagtttca tacctcggac gataaagaat ttacgtatga ggatctgaaa    1140
cggggtatat tccgtttact ttcggataac atgatttcgg agattattcc ccatgccgtt    1200
ttcaatccgg aagatgatac gtacgatttg catctgaaaa taaagatgga gaatgaattt    1260
tcggttcgtg tgggaggtaa tgtgtctacg accagctcca atcagattta tctgggactt    1320
gcataccaga atctgaacta ttattcgaaa gagtttacgc ttgacggaca gttgggcaaa    1380
atatataata atgctcagtt catggccaaa gtcgattttg ccactactat cccgacatcc    1440
tatcgtttta tcgcttccat cagtactttc gattatttta aaaaagataa gctttttctct   1500
aaaaacgata aaccggcttt taatcagaag gatgaacgat tcctgaaatt gaaggtcgct    1560
cttcctttct tatccagcaa aagattggaa ttgggctttg gaattgcgca gatagaggat    1620
cgatactttc agaataatgt gattgatttt gataaggaca aatatgataa gagcggatat    1680
ctcctgtttg gtggttccgt tagtttaat ggcagtacac tgaactccag gcaattcccg     1740
attcaaggtg caagagaggc cttggttgct cagatattta cgggaaatga aagttttcgt    1800
ccgggggtta attcggagaa taaaaagccc gtaaaagaaa agcattcgtg gttacaattg    1860
tcatatatga aggagaaata tcataagatg ggtgctaatt ggatattggg atggtatctg    1920
gacgcagttt atgcctctaa gaacttctca gagaactata cggccactat gatgcaggct    1980
agtgagtttg cccccactgc acatagcaaa ttgacgtata cgaagctttc cgtgccaat    2040
caatatgttg ctgccggaat acgtcccatt tatcgtttaa accagatgtt tcatgtccgt    2100
ggagaatttt atggtttttt gcctattttc ccaattgaac ggaactccat taataaggct    2160
tattatggaa aagcattttc ccgattcgaa tatttaggag aaatttcagt ggtttgtcaa    2220
ttaccatttg gagctatctc tgcatatgta aatcattata gctcaccaag aagggagtgg    2280
aatgtagggc tgacactcgg ctggcaactg tttaattacc ggttcatcga ataa          2334
```

<210> 221
<211> 225
<212> DNA
<213> B.fragilis

<400> 221

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gtggcaatgt atgggaatgg tgtgacaatt ggtacactca agaatactct caaaacggta      60
aatctgtcca tcccggatgg ccatttaatg gtacatctgc cttttttccgc cgggtcttgc    120
gaggtggtag ttggggtggt actgcaaaag gctgccgagt gtcatatatt gactatgacg     180
tgccaaacta tcgtgatgaa tatggaggtt ttaggcttgt tttag                    225
```

<210> 222
<211> 300
<212> DNA
<213> B.fragilis

<400> 222

```
ccaaagaatc tcaaaagtag ccgtactatg acatcaaccg actccatttt acaattaata      60
agtgaaatac atatcccagg attttttatt accgtagact tcctgcaaat cggaaaggct     120
attcctcaag gaataagcgg cttttttaaaa gaaaagtacg ataaaatatc tcatggtgcc    180
agcggaagaa aatttatta tcaaaaatca ggttggcgca tggcatttac attctatcct      240
accgaccggg tagtcgatga gaaatatgca atgaagaaca aaatgataaa gaagcgataa     300
```

<210> 223
<211> 186
<212> DNA
<213> B.fragilis

<400> 223
ttaccggttc atcgaataat ttatttgcaa aaaaagttcc ccaaaagctt gcaaattcaa   60
gaaaaggccg tatctttgca cccgttaaac aaaaacaatg gtcgcgtagc tcaactgaat   120
agagtagctg actacggatc agccggttac aggtttgaat cctgtcgcga tcactttaag   180
gtttaa   186

<210> 224
<211> 852
<212> DNA
<213> B.fragilis

<400> 224
aaaacaaatc atatgacaac aagaatgtat gtaattaata ccttgagcaa catgcacgta   60
ggcagtggtg aggtcaatta tggagtgata gacaatctaa ttcagcgtga ctctgtcact   120
aatctaccca atatcaactc ttccggtttg aaaggagcta tacgcgaata tttcaaggag   180
aatgaaaatt tagtaagaga attattcggc agtgctccca aagacgaaaa aacactcccc   240
ggaaaagtgc gtttctttga agccaacctc ctatcgatgc cagtaagaag tgacaaggtg   300
ccctttctga tggctacctc agacgaagta cttcaagaat tgataaccaa aatgaagttc   360
ttcaattgcg aagaagccac tcaatacata tcccatctgt ccacattgct tgataatata   420
aaaacacaag cgcaaggtac tgattttgcg tacgtgtttg acccttcact gcaaggtgca   480
atcattgaag aagtttctat acgggctact tgcccaagcc acattcctct tcaactgtct   540
ctaaagaaac ttttaggcga tagactggtg attttatcac ataaatattt ctctatacta   600
tccgatgaca atcatcttcc agtcctgtca cgcaataatc ttgaaaacgg gcagagcgcc   660
aatttgtggt atgaacaggt tttaccgcgc tatagccgac tttatttat gttaatggac   720
ggaaatgcac aaagtgagta tctgaaaaaa ttcagagata ccctatgtac cccttctacc   780
attattcaaa taggagctaa cgccagtata gggtacggtt actgccaaat atcagaatta   840
tcacctttt aa   852

<210> 225
<211> 540
<212> DNA
<213> B.fragilis

<400> 225
aatcattgtt ttctgccctt attcttctgc tgcaagaatc cggctatgtc agtttggatg   60
tacatagcag tcaccgatcc cggttatggc aacgaacaaa acgatgagtt tatgaagaat   120
atgggtatag aggcttttgt caagtacaat tattttcaca aagagcagaa gcggacctgg   180
aacaaggatg cttttaccat acaaaaccta agaaggcat ccattgctgg acaccttcct   240
tctatattta ttcttaatcg ttattttat aaaagatcaa gtgccttgaa acatttcact   300
aacttaccga tagcaaaatc aatctgttct ttagagtgtg tagccatcaa cgagaaacga   360
atcaacgtat cgttcggaga acatgcggga ggcacaactg gatttacaaa cacaccttcg   420
tcaaataaca tcttagttac cataaatgtc ttctccatat cacgtacata tagaggaatg   480
ataggagtgg aggtatgtcc gatctcaaaa ccaagttcac ggaaacactt taaagagtaa   540

<210> 226
<211> 798
<212> DNA
<213> B.fragilis

<400> 226
ggatctaata aaaaagatat gcagaagcaa gcaaaagaga taaaaaaaca tcttttcctt   60
ttgggaggac atgatttaga gatgcaaact atagtccaga tattgacaga tagaaacgtc   120
atattcaagg accgttattt acaatgggat aatgcgttat taagtcaata cgaagaagag   180

```
atacaacaat atggtaataa agagccgttt attatctatg gtgtagaatt gaaagaggac    240
atcacgcccc ccactaacta tattcgaatt gatcaccata atgaatatgc tacctatcct    300
tcggcattgg aacaagtagc ttctattctt gatcaccctc tcaatcgata tcagacatta    360
gttgcagcaa atgataaggc ttatattcca ggaatgttag aaataggagc cagtcatgaa    420
gaaataaatc taatcagaca agaggatcga aaagcacagg gagtaataga ggatgacgaa    480
aagttggctc aagaagcaat tacaaacgga acagaaaaaa ttggtagttt atatgttgtg    540
ttcactacag cgaacaaatt ttcacccata tgtgacagat tatatcctta tgaaaaatta    600
ctaatctaca ctccgaatga gttaatatat tatggaaaag ggataaattc tatccagaag    660
atattaaagc gatacacccc aataagtaat atcttttggg gaggcggtat taatggattt    720
atcggaaccg tacgcaaccg cctaacaaca aatgaaatac ttaacatagt cgaacagata    780
aaactattag aattatga                                                  798
```

<210> 227
<211> 747
<212> DNA
<213> B.fragilis

<400> 227

```
aaacgaaata aaatgaaaac aattttcaga atgttatcgg tattactgct aactacaggt     60
ttattgagta gctgtataca aatcggtgaa ggtatccaac ccagcaagaa gctcatcaca    120
agagactata aagtgaagga gttcaataag attgatgcgg ggactgtggg caacatctat    180
tatacacaat ccacagacgg aaaaacggat ctgcaaatct acggaccgga taacatcgta    240
gcactgatac aagtagccgt aaaggacaat acactatttt tgagtatcga taaatcaaaa    300
aaggtacgca acttcaaaaa gatgaaaata accattacat ctcccacctt aaatggtatc    360
tcctttaaag gagtgggcga tgtacatatc gaaatggat taactacgga taatcttgat    420
atagagagta aaggggtagg taatgtggac attcaatcgc tgacttgcca aaaattgaac    480
gttcagtcga tgggtgtagg tgatgtaaag cttgaaggca cagctcagat agctgctctt    540
cattccaaag gagtgggcaa catagaagcg ggaaatctac gagccaacgc agtggaagcc    600
agctcacaag gcgtaggaga tataacctgt aatgcaacag agtccattga tgcagccgta    660
cgaggagtgg gaagtattaa atataaaggt agccctacta taaaatcact cagtaaaaaa    720
ggagtgggaa ctatcaagaa tatctaa                                        747
```

<210> 228
<211> 2355
<212> DNA
<213> B.fragilis

<400> 228

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aaacagaata aaaaaggatc taataatatg atacgacatt atttgaaaat tgcatgtagg     60
aatttgctga aatacaagac tcagagtatc atcagcatcc taggattagc tatcggattt    120
acctgttttg cgcttgctgt cttatggata cgttacgaaa tgacatacga caccttccat    180
gaaggttttg accgtattca tttggtgtat cagaaatcgg cattaagtga cacaggcgtt    240
acaacaacaa ttccatatcc ggtatccact tctttagaaa agcagtttcc ggaagtggaa    300
gatgcctgcg gttttctttt ttatgaacag gaagtgacag tagacgatgg cgctatccgg    360
caactgtatg aaatcaatgc agactcttgc ttcatgcata tgttcgggat acaagtactc    420
tccggcagcc ttgatttcct ggaatcggaa gagcggatag cactgacaga gcatgcggcc    480
aaggaacttt tcggtacgga aaatccgatc gggaaggaaa tcaaactgta tggtgcccct    540
aaaaccgtat gtgcgatcgt caacggatgg aaccgtcata ccaatttacc tttttctatt    600
ttaacgggag gaatacgtca atggcataat gcatggtatc acggaggatt ccatgtattt    660
ataaaattgc acaaagaagt aaatgccgaa acttttcaga aaaaactgga acaaacgaaa    720
ctcgaagcag acagcaaggg cggcatacag aatctgatgg ttatgcccat cagtaagtgc    780
cactatactg tactggccga ccaaaatgcc atccagttca gctatatcct attcttctcg    840
attgtaggcg gattagttat tctttgttcg ctgatcaact acctgtcttt gtttgtcagc    900
cgtttacgga tgcgaagcag agaattggca ttacgtaaag tatgcggttc atcagacctc    960
catctgttca ccctgcttgt tacagaatat ctgctgatct tgttggctgc aggacttatg    1020
ggaatggccc tgatagaatt ggtattgtct ccgttcaaag aattgtcggg agtaaaagaa    1080
ggagatattt actgggaatc ttttttatac ttcgccctcg tcatcggatg ttctcttgcc    1140
acattcctgc ctgtaacttt ctacttcaac aaacgaacgc tacaaagtaa catacagcaa    1200
aagaccgtaa acagatacgg gtatctggga cgcaagataa gcattgtttt tcaactttct    1260
```

```
atcagtatct gttttatctt ctgcatcagt gtcatcatga agcagctcta ttatctcagc    1320
actacagata ttggtataga acgcaagaat atagcgactc taagcatgta tccgcaaaac    1380
aatctattgc ctgccgctga taaaatagag cagtttcctt acgtcactca ggttctgaaa    1440
ggacactttt cgctgctacc caaaactgca tccatggcta tgcacttcaa ggattgggac    1500
ggaaaacaac ccggagatgc agagatcgat atggaagtac tgatggaaag tgaagagtta    1560
gcacagtttt acggcatccg ccttttaaaa ggaaagatgc tgaaagaagg agagagggat    1620
gccggcacta ttgtaatcaa tgagacagcg gccaaagcac tcggatggaa tgatccgatt    1680
gggaaaaaac taatcagacc caacggaaca gggacaaccg ttatcggttt ggtaaaagac    1740
ttccatacga catcgcctac cactcccata aaacctatcg catttatagc caaaggcttt    1800
tccggattcg acctgggcaa aggtgatgta ctgataaagt atagagaagg cgaatggccc    1860
aaacttaaaa aagacattga acagctatgt cagaaagaat atccggaaaa taaaatcaga    1920
ttatccaata tggaggagac ctatgacaac tatctcaaat cggagcagac ccttttgaaa    1980
ctactgagtt gtgtagctgt tgtctgtatt ctgattgctg tattcggagt gttctcttta    2040
gtgacattgg catgcgagca acggcgtaaa gaaatcgcta tcaggaaagt aaatggtgca    2100
acacttggca acatcctctc gatatttata aaagagtacc tgatactgtt actctgcgcc    2160
tcgttccttg cttttcccggt cagctacatg atcatgaaag catggctgga gaattatgtc    2220
gaacaaatca gcataggcgt ttcgatgtat gtcactatct ttacgggaat cggtatcatc    2280
ataaccgcct gtatcggctg gagagtatgg aaagccgccc gtgaaaaccc ggcggaagta    2340
gtaaaaacag aataa                                                      2355
```

<210> 229
<211> 396
<212> DNA
<213> B.fragilis

<400> 229

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caactggtca aaggtgatga tttcgtcaac acgatttata aattcgggtg caaacgattt     60
attcagagcc ttctgaatca cgctgcgaga gaattcttta tcgtcaagac ggctttgagt    120
ggcaaaaccg actccacgcc caaactcttt caactggcgg gttccgatat tcgatgtcat    180
gataataaca gtattcttga agtcaaccat tctgccataa ctgtcagtca gccgaccttc    240
gtccatcacc tggagaagca gattgaacac atcgggatgc gccttttcta tttcgtcaag    300
caatacgata gaatagggtt tacggcgtac tttctctgtc aattgtccgc cttcctcgta    360
tcctacgtat cccggaggcg ctccaaccaa gcgtga                               396
```

<210> 230
<211> 1152
<212> DNA
<213> B.fragilis

<400> 230

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attataataa agatgaatag acactattta ataacattga ctccgatgga ttggttttttc    60
tttggaggag aaagaacatt ggatgatgga aagagtgcag attatatatc gcattcaaat    120
aagttccctc aacaatccgc tcttttaggc atgatccgtt accaattgct gaaacagcac    180
aatttactgt cccaatttcc ttacacagag aataaaccga cagaaaaaga gataatgaaa    240
gcacttattg gagaacagag ttttcaggatg accgaaagaa aggctaaatc acttggctta    300
ggcgtcatca aacagatttc cccactcatg cttatagagt gcaaggatga tacctcgtca    360
cgctctatct actttccatt gccattagac gatggataca agtatcatt taatgaaaca     420
agtaatgaag acaaagtttt ctataatgga attgaatgcc cgattcccaa tgtttacccg    480
gcttccgaag agcaagattc cggtaatcaa aaaagaaat ttttcgatca taaaacatac     540
aataattatc ttttctggtg cacccaagga ataatcaga taaaaaaaatt actatctgat     600
gaaatatgga ttagtaaaat gcagatcggc attaccaaac atgtggaaga aggtgaggat    660
aacgacaaaa gctttttataa acaggagttc cttcaattga aaaaatcatt tatatatgcc    720
ttttatatca ccttatcggg agaatcagag ctatcttccg atattataca attaggaggt    780
caacgttctg tattccgcat ggaagtagaa tcaatagaag agaatagcga tatacaagaa    840
aaataccaaa cagctgctca gttcctgact caaagcgatc gtcttctaat attgagtcca    900
acttatgtag ataacctaaa ggaactttct gctttatgta actttatgtg gagcgactcc    960
attgtctttc gcaatattca aacgactaac gcaagtaact tttatggtaa acctatcaaa   1020
agcagtagta aataccactt cttaaagccg gggtcagtac tttatttttaa gcaagggaaa   1080
cgcaaagaag tcgagaaact attgatggat tacacttatc ttcgtttatc cggttataac   1140
```

atatatatat aa   1152

<210> 231
<211> 183
<212> DNA
<213> B.fragilis

<400> 231
caagtcccaa aagcgatctc catgattcat ctcgcaagta tggcaaagtt catgcaaaag   60
gacgtaatct atcagatgtt ttggcaacaa tacaaggaaa taagagagat ttatcttttt   120
acgagaggaa cagcttcccc atcgcccacg gctcgaattt atctgcacgc tctcgtaggg   180
taa   183

<210> 232
<211> 297
<212> DNA
<213> B.fragilis

<400> 232
ggtttaacaa atggccgcgt agctcaactg aatagagtag ctgactacgg atcagccggt   60
tacaggtttg aatcctgtcg cggtcactct aagaaaataa cgataaacgg tcgcgtagct   120
caactgaata gagtagctga ctacggatca gccggttaca ggtttgaatc ctgtcgcgat   180
cacaagaacc tccataatca aattatggag gttttttgtt ttccttgcat tatctctttt   240
attggatcat acctaaattc tgagggattc ctcttttaa ttggcagtct gtactga   297

<210> 233
<211> 285
<212> DNA
<213> B.fragilis

<400> 233
attttaaaaa aaatatttat gaattataag aagaaaatta tttgtctttt ggtattattt   60
acaattgttg ttgtaaatgt gcttaatgtt gttgtgaaat cggatgatgc tgagacatta   120
actctatctg gaatagaagc tgtagcagct acttatgaaa acagtccggg aaactatact   180
ggagcccata atcaatattg tacaagtccc aaaaatgcta caggatgtgt ttcggatcct   240
gatccaaccc gcacttgttc atattcaatt ttttgtaaaa aataa   285

<210> 234
<211> 1431
<212> DNA
<213> B.fragilis

<400> 234
ctaaatagaa aaaagaatat tatgaatcag ttaaccgcta tactaaaaca acacactcca   60
atgatccatt ttcaacataa tgaatcagga gcaaccttac gagcatcaga agttaaacca   120
ttattagata aattcattct tacaaaactc ggaaatggag atattagaga aggacggctt   180
tatgctaaaa aaaataattg gttaatagat aatgaaaaaa attatgcatt aaattataag   240
ttaagtatat ctctacaaaa aaaaagtaga ctagaatatt taataacttc tagtacattt   300
cctctaccaa ctgagcgtcc ctctaatttc tttacgatcc aaaatagtcc atattttgct   360
caagaaaagt gcgttggtat aaatacaaac tctaccatta tcttaaaaaa aagcaatagt   420
gaccctcgta aaaagaggc tgagtttaaa gaaaaaaatt ggagtcaaat agacaaaaaa   480
ggactggaat ggcaagactt tactataaaa atattctctc tgaaaggtga tttaataaat   540
aaaatccaaa catatttacc agctttcttt atatgccaca attttggtac aagaaacaac   600
aaaggtttcg gttcttttac tgttgaatat atcaataatc aaaaaaatat atgcaatgta   660
gaagatacct tgaaagaaaa tttttgcttc gtatataaga aaaaaatagc tttgtcatgc   720
caaagtacat tggattttat ctatatctac aatcagatat tttcaacaat aaagaaggat   780
taccagattc taaaatctgg atataatttc agaaacgaat atataaaatc acttctattt   840
tgttatttcg ttagcaaata tcctaattat agatgggaaa aaagaaaaat gaagcaatta   900
attaaagcaa gaggttatga attgaaaggc gatcattctc ccatttctgg aataagagag   960

```
aacgacaact cctggaatga tcctaatcct aatggatata attatgctta tataagagca    1020
atcttaggat tagcagaaca atatgaattt caattagaaa caccatatca gaaagctatt    1080
gtcaagataa aatcagcaaa caattgtatc agtcgttaca aatctccttt attatttaaa    1140
ataataaaca acagcattta tttggttggt aatgaaataa atactgaaat actaaataaa    1200
ccatttcaat ataactatat agaacaaact aaaaataaaa atatgagaac aggaaagagt    1260
gaaataacag agcggacaat gcatataaat gagattgaaa tgaactataa taatagaatt    1320
aattatcatt atacgccaac ctccttttca ttaatcgatt ttatgcaata tgcaatgtct    1380
tataaaaaaa atgggaaaaa catttaaat tatattcctt taaaacaata a             1431
```

```
<210> 235
<211> 888
<212> DNA
<213> B.fragilis
```

```
<400> 235
agtatgagaa aaataaaagt aggaatcatt caacaggcta acacatcaga tattaggata    60
aacctgatga acctggctaa aagtattgaa gcatgtgccg ctaatggcgc tcaccttgtt    120
gttctgcaag aacttcataa ttctttgtat ttctgtcaga cagagaatac ggatttattt    180
gaactggcag aacccattcc tggcccttct accggattct attccgaact ggcggcagcc    240
aatcggatag tgcttgttac ttctttgttt gagaaacgtg ctccgggact atatcataat    300
acagctgttg tctttgaccg ggatggaagt attgccggaa aatatcgtaa gatgcatatt    360
cctgatgatc cggcttatta cgagaaattc tattttactc cgggagatat tggctttgaa    420
ccgattcaga cctctttagg caagttgggt gtgttggttt gctgggatca atggtatccg    480
gaagctgctc gcctgatggc gttgaaagga gctgagattt tgatttatcc tactgctatc    540
ggttgggaga gtacagatac agatgacgaa aagaaacgtc agctcaatgc ttggattatt    600
tctcagcgtg cgcatgcggt agccaatggg cttccggtga tttcagtcaa tcgtgtcggt    660
cacgaacctg atccgtcagg acagaccaac gggatattat tttggggaaa tagtttttgtt    720
gccggaccgc agggtgaata cctggctcag gcgggaaatg accgctctga aaatatgatt    780
gttgaggtgg atcttgaacg ttcggagaat gtgcgtcgtt ggtggccatt tcttcgtgat    840
cggaggatag atgaatatgg gaatttaaca aaacgtttta ttgattga                888
```

```
<210> 236
<211> 1839
<212> DNA
<213> B.fragilis
```

```
<400> 236
acctttggaa ataacacgga atccgaatta atatgtactt ttgcagacta ctttaacaaa    60
aatataaata atatattaaa tatgttcaga acgcacacgt gcggagagtt aagaatctcc    120
gatgttaata aacaagtcaa gctgtcggga tgggtacagc gcagccgtaa aatgggaggt    180
atgacttttg ttgaccttcg tgatcgctac ggtatcactc aattagtatt taatgaagaa    240
atagacgctg agctttgcga acgtgccaat aaattgggtc gtgaattcgt catacagatt    300
gtcggaaccg taaacgaacg tttcagcaaa aacagtcata tcccgaccgg tgacatcgaa    360
atcatcgttt cggaactgaa tatcctgaac tcagccatta ctcctccttt tactatcgag    420
gacaacaccg acggtggtga tgatatccgc atgaaatacc gttatctgga cttacgccgt    480
agtgctgttc gttcaaattt ggaattacgt cacaaaatga cgatcgaggt tcgcagttat    540
ctcgataaac tgggtttctt ggaagtggaa actccggtat tgatcggttc aactcctgaa    600
ggagcacgtg actttgtagt accttcccgc atgaatccgg acaattctta cgcattaccg    660
caatctccgc agacactgaa acagctattg atggtttccg gtttcgatcg ttatttccag    720
atagccaaat gtttccgtga cgaagacctg cgtgccgacc gccagcctga gttcactcag    780
attgactgcg aaatgagttt cgtagagcag gaagatgtga ttactacatt tgaaggaatg    840
gccaaacacc tgtttaaggt gatccgtaat atcgaactga ccgagccatt cccacgtatg    900
ccttggagcg aagcaatgag attgtacggt agcgataaac cggacattcg cttcggtatg    960
caattcgtcg aattaatgga tatcttaaaa gggcacagtt ctctgtatt cgataatgcc    1020
acatatattg gcggtatttg tgccgagggt gcagccagct atacccgtaa gcaactggat    1080
gccttgaccg aatttgtgaa aaagccacaa atcggtgcaa aaggtatggt ctatgcccgt    1140
atcgaagctg acggtactgt gaaatcaagc gttgacaagt tctatacaca gaagtttttg    1200
caacaattga aggaagcatt cggtgccaaa cccggtgacc taatcttgat tttatcagga    1260
gatgatgcca tgaaaactcg taagcagctt tgtgaattac gtctagaaat gggtaatcaa    1320
```

```
ttgggattac gggataaaaa cacatttgca tgtctgtggg ttgtggactt ccctctattt    1380
gaatggagcg aagaagaagg cagattaatg gctatgcacc atccgtttac ctcacccaaa    1440
ccggaagata tccatctgct ggatacaaat cctgctgctg tgcgcgctaa tgcttacgat    1500
atggtaatca atggtgtaga agtaggaggg ggatcaatcc gtatccacga tagccagttg    1560
cagaacaaaa tgttcgaatt actcggattt accccggagc gtgcgcaaga gcagttcggc    1620
ttcttgatga atgccttcaa gtttggtgcg cctcctcatg gcggactggc ttacggatta    1680
gatcgttggg tatctctttt tgccggactg gactcaatcc gtgactgcat tgcattcccg    1740
aaaaataact ccggtcgtga cgttatgttg gatgctcccg cagcactcga tccgtcacaa    1800
ctggaagaac tgaacctgat tgtagatatt aaggagtaa                           1839
```

<210> 237
<211> 1245
<212> DNA
<213> B.fragilis

<400> 237
```
tatagtatga aaaagtatcc aaaaatcggg attcgtccca ccatcgatgg acgtcagggc     60
ggcgttcgcg aaagccttga agaaaaaaca atgaatctgg caaaagctgt tgccgagttg    120
atcacttcta atttgaagaa tggagacgga accctgtgg agtgtgtgat tgcagatgga    180
accatcggac gtgtggctga aagtgctgct tgtgcggaga agtttgaacg tgaggggta    240
ggagccacta tcactgtcac ttcatgctgg tgttacggtg ccgaaacaat ggatatgaat    300
ccgtattatc cgaaagctgt ttggggattc aatgggacag agcgtccggg agctgtatat    360
ctggctgctg tgctggcagg acatgcacag aaaggacttc cggcatttgg catttatggt    420
cgcgatgtac aagacttgaa tgacaattct attccggcag atgtagctga aaaaattctg    480
cgttttgcac gtgcggctca ggctgtagcc acaatgcgtg gcaaatctta tctgtctatg    540
ggcagtgttt ctatgggtat tgccggttcg attgtaaacc cggacttttt ccaggaatat    600
ctgggcatgc gtaatgaatc gattgatttg acagagatta ttcgtcgtat ggccgaagga    660
atctatgata aggaagagta tgccaaggca atggcttgga ctgaaaaata ctgcaaaaag    720
aatgagggca atgactttaa tatacctgaa aaaacgaaga cccgtgcaca aaaagatgag    780
gactgggagt tcattgtgaa aatgacaatc atcatgcgcg atctgatgca gggaaaccct    840
aaattgaaag aactcggatt taaggaagag gctttggggc ataatgctat tgcggcaggt    900
ttccaagggc agcgtcagtg gaccgatttc tatccgaatg gcgacttctc tgaagcatta    960
ctcaatactt cgttcgattg gaatggtatt cgtgaggctt ttgtcgttgc aacagaaaac   1020
gatgcttgta cggtgtggc tatgctgttt ggtcatctgc tgacgaatcg tgcacagatt   1080
ttttcagatg tacgcacata ttggagtccg gaagcagtga acgtgtgac cggtaaagag   1140
ttgacaggaa tggctgctaa cggtattatt cacttgatta attcggggc aactactctt   1200
gacggaaccg gacaacagac gaatgctaac ggtcttaacc acggg                  1245
```

<210> 238
<211> 411
<212> DNA
<213> B.fragilis

<400> 238
```
ttaaaaacga ataaatcaga gaaaatgaac tatatgatac agcattatct caaaacagca     60
atacgcaatc tgctgaagta taagacacac agcattattt ctgccatttg tctttccgtt    120
ggtatgactt gtttcagcat catccacttt tttatcaatg aaatagatgg agcatcacgt    180
aacatgccca atttcgaaca aaggatttca atccggatga tcaattccaa ccacgaagta    240
ggaggatggg ggtggagtct caattcttct gagatccgaa ccctgacaga acatcccata    300
ccgggtatta agcaaatctg cttccactct ttccaaagag aagacgaagt tgtattcatc    360
aataggggagc agggaagaaa agccttacat catctcatat atggatactg a           411
```

<210> 239
<211> 495
<212> DNA
<213> B.fragilis

<400> 239
```
aagaaaaaga aaactatgaa ttggaaatta gtagaatgtg aaattgcact aatcgtatct     60
```

```
ttgacagtaa ttgagtgtgt gaatatggga cagaattccc ctaaagacat tacatgtctt    120
actgtgtttt tttgcattat gattgttctg ttgccactta ttggtgtatt gcaacaatgg    180
catctctcat gttttcagaa tcgccagaaa gaaaaagagt atcaggctaa acaagaaact    240
gatgaaaaga tgaaaacatg gctactcgcc cgtgaagcaa ttatcaagga taaagaaaaa    300
gaagagctaa cgaataaggt aaatggacta caacaaaaat gtgattcctt gatagaaaac    360
caagaaaatg aattaaaaaa attttatctt tctattcttt ctattattgg cactaaagac    420
gatctgaaat cgattgagga gaacttcaaa aagatgaagg atttctttga agaatataaa    480
aagataacta aatag    495
```

```
<210> 240
<211> 186
<212> DNA
<213> B.fragilis
```

```
<400> 240
ggagcaggga agaaaagcct tacatcatct catatatgga tactgatcct aatttctttt    60
cacattataa tgcatccttc ttatatggcc aatgctttte ccacaactcc gaaagaagtt    120
gtgttgtccg aaagttgtgc ccgtaaagta tacgggaaag agcaacccgg tagggcacat    180
tactga    186
```

```
<210> 241
<211> 318
<212> DNA
<213> B.fragilis
```

```
<400> 241
agagttaacc tccagccaaa atgttctttt ccggttcgtt tatcggaaaa aatatctccc    60
aaccatcttg ttcgtgttgt aagttacatt gtagatgctt tggatattag ttacctgctc    120
tcggcttata atggaggagg caccaacagc tatcatcccc gtatgatact caaggtcctg    180
ttttatgctt atctgaacaa tatctcattcc tgccgcaaaa cccaaaaggc cttgcagaag    240
aatattcaca tcatgtggtt gtccggtaat agtacatcca atttccgcac tatcaatgat    300
ttccgtggca aggtttaa    318
```

```
<210> 242
<211> 186
<212> DNA
<213> B.fragilis
```

```
<400> 242
tttaaaagcc tctacttcat ttacacattg cagcagaaaa tgtacagagt acaaaaagaa    60
agacttttt tcatccttgc tttgatggta ggtattcgta aaatcgacca aagtagtgat    120
cccaaagaat gggtcgtcaa aagcagaaaa gaatttaaaa tgttctttt cattccaatt    180
ttctaa    186
```

```
<210> 243
<211> 768
<212> DNA
<213> B.fragilis
```

```
<400> 243
tgcaatgaag attcgcaaaa atatcgtgtc ttcccctgga gagcaaggac tgcatactgt    60
tgttgtttaa cacatccttt gagtgtagat acgttgaata tactatggag gactatgttg    120
aatgaaagac agaaatttcc tattcgtaca ggattaaaat taactgtttc tgataataat    180
ggagtggtcc gctcttcttt tagtccggat agcctttctt gtttatctta ttcttcgata    240
tttacttatt atgtaggcta tagatgtgaa attgaaatct tagggtttgt atctatatct    300
tttttctcag tatttgtaaa tatagtttgg actcttattg gagttgttgt tgcttttgtg    360
ctttgtgtga ttcttacaat ctatatatat aagttgtctg ttcaccctcc taaaataaaa    420
gaggttacta cttatgttca gacagttgct gttaaaaagg ggactctgcc tatatacgat    480
ttgaaagatg atcttaaact ggatgttggt aaaggtgtat tgatctgcga aaacatggaa    540
```

```
gtatctctta ctccccagca gcgtgttctt ttagttttgt ttattaaggc tgagaatcat      600
actctgtcta tgtctcaaat tatggcagat gtttggccgg gaaaatctat ttctcccgat      660
tgtttccata aagcaataga acgtttgcgt gatttgttaa ggcagcttcc tatgaccata      720
caaattgaat atttgggggga ggaaatttat cagatgcaaa ttttataa                  768
```

```
<210> 244
<211> 204
<212> DNA
<213> B.fragilis
```

```
<400> 244
tttattctgg ataagcaaga taaaatggta tgttatacaa catcaaaggc agagaacaaa       60
gcaattattt atagtaatca tttactctac aaccaacaga gctactctta cttaaatata      120
gaaaagcatc ccttgtgtta caagaaatct aaatctattg actttactaa tttaaagtac      180
aagtccaagt ctatattttt atga                                            204
```

```
<210> 245
<211> 1827
<212> DNA
<213> B.fragilis
```

```
<400> 245
ggcacattac tgaaaatagt caagttgaag gaaagcgaaa aagataaaag cacatactat       60
aaagttgtca atgttatcag gaatcttccc aaaacactaa atgttgaaac agatatctat      120
ttctctcatt tgagagaaga gaacagacaa caaggataca tcacagaagg tacactggaa      180
acagcagacg gattgaataa agccaatgaa agcctaaagg ggataacaac tcttcataat      240
aatgaaatgg catatttcat tgcgaacaaa gaagctgact cgtatcacga tccgcagcga      300
atgataggca tagcattcat taccttctta tcctctctga ttctgttatc gggtatgata      360
aactttctaa agttcatcat acagtcattc tacaaccgta atcgtgaact ggccctgcgg      420
aaaagtctgg gtgccagccc caaaagttta tttgcccttc tattcaccga agctttctgg      480
atgctgacat tttctttatt gttctcgctg gtcttatccg aatgtacctg tttactactg      540
acaacctata ttccgcctaa agaaatgatt ccaatagata tccaaactct atatggcatt      600
caagttaaac tttatatagg gctgttactg atctgcaccc ttgtaatgct atatcccatc      660
cggcgtttgc aacggtccgg tcttgccggg cacatgaaaa ctaacagcca ccggcacctc      720
tttcgcaaca tcatgatgtg cgtacagcta tgtgtatgta tctttttct gggtatgagt       780
atcgctatac atttattcaa tagtgtagga agcgttttgt accttcctct atcagacaaa      840
gaaacaaatt ccacgctttg ctttgaaatg aatagtgtta ctctcggcaa aaataaggat      900
gcgattttat cacaaataaa gatgttgcca ggagtggaaa atatcagttc agctttgatg      960
agcggcaact ataattcgtt tctgaccagt gactatgagt ctgccgatca ccgtactctc     1020
actgtcagag tcagacaagg agatcccagc tacttccagt tctttcggat tcctttccgg     1080
ggagagatcg tcgaacctca tacaagtaac gtggtttaca tcagcgaagc ctttcaaaag     1140
cagttggaaa atgattctgt aagcggaaat gtaaaattag gtaaagagaa ctatcggata     1200
gcaggtacat acaaggcttg ttacggggag aacatctcag aacacaatca atacaatatt     1260
tctgttttct tcccgactga agaagcatcc gtaatttata tccgtttttcg tgacgatatc     1320
agttttggta aagccaaatc agaaatagaa agggtatgcc gtaattacgt cccagagtca     1380
ttgccactcg atatacaacg actggatata agaagaagta caacacaagg tatcagagac     1440
ctgatgggcg atgcctcact gctattaggc atcataagtg ctcttctggt tatactgagc     1500
atatactcag ctatctctat ggacacagtc agccggcaga aagaagttgc tattcgcaaa     1560
ataaacggcg caactccgaa aataattgct ttgatgttcg gaaaagcata tataatccaa     1620
ttcatactgg cctataccat cacttatcca ttattaaggt tacttgtgat agacataacc     1680
aaggatagcc cgatcagcag tattaccgga tttgcatggg ggatttacct cttcattctg     1740
ataggtttac ttatctttgt aacaacagcc tataaaatct acagaatcat gcatctcaat     1800
ccggcagaaa taataaaaaa cgaataa                                         1827
```

```
<210> 246
<211> 894
<212> DNA
<213> B.fragilis
```

<400> 246
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atgaaaacac tcctaaatat taaactccat ttatctaaaa agaatatatt taccatctta    60
gttttattc  ttgtttttaag tggtactacc ggttgcattc aacacaaatc cgaccagaaa   120
cgactgcctg ctctttcttt tactgtaaat ggagagagct ttgaaatgat tccggtagaa   180
ggtggaacct ttattatggg aggcacaagt gagcaaggta atgattgcga aaacaatgaa   240
aaaccaacgc atgaggaaac tctaccgttc ttttatatcg gaaagtatga agttacccag   300
aaactgtgga aagcagttat ggggactgat ttcgatcaat catacaattc aggatgtgaa   360
gattgtccgg cagagtatat cagttggaat gacacgcaaa agtttataag caaattgaac   420
accccttacaa acaaaacatt tcgcctgcct accgatattg aatgggaata tgccgcacgc   480
ggtggcaagt atagtgaaaa atacaaatac agcggaagta atgatatcga tgaagttgcc   540
tggtatattg aaaattatca aaaaagtaaa tatggagaca aagggactac acatccggta   600
ggtatgaaaa agcctaatga attaggattg tacgacatga gtggcaatgt atgggaatgg   660
tgtgacaatt ggtacactca agaatactct caaaacggta aatctgtcca tcccggatgg   720
ccatttaatg gtacatctgc ctttttccgc cgggtcttgc gaggtggtag ttggggtggt   780
actgcaaaag gctgccgagt gtcatatatt gactatgacg tgccaaacta tcgtgatgaa   840
tatggaggtt ttaggcttgt tttagtaccg gactcagtac agactgccaa ttaa         894
```

<210> 247
<211> 840
<212> DNA
<213> B.fragilis

<400> 247
```
atcactgttt gcacaatttc ccgtatcttt gcaggacgaa tacgaattta ctttcaacaa    60
tacatgaaaa aatttatttt agacctgaca gtaactgaga atctcagatt gcataccaac   120
tatgtgctgc tgaaattgac ctctcagacc gtcctcccgg atatgctacc gggacagttt   180
gcggaaattc ggatagatgg ttcacccacc actttcctgc gtcgccccat ttctattaat   240
tatgtagaca gacaacgcaa cgaagtatgg tttctgatcc aacttgtagg tgatggaaca   300
aaacgtcttg cgcaagtaaa tcgaggagag attatcaatg tagtactccc actcggaaat   360
agcttcacaa tgcccgaaaa gccttctgat aagctattat tagtgggcgg aggtgtaggg   420
actgcccccta tgctctactt gggtgaacaa cttgctaaaa acggcagtaa accaacattt   480
cttttggggg cacgcagcaa caaagatctg ctccaattag aagattttgc cgcttacgga   540
gaggtctata ctacaaccga agacggcagc catggagaaa agggatatgt gacccaacat   600
tccatactga ataaaataaa attcgagcag atttatacat gtggcccgaa acccatgatg   660
atggcagtag ccaaatatgc caaaggtaac gatatcaatt gcgaagtatc attggaaaat   720
acaatggcat gtggcatagg agcctgcctc tgttgcgttg aaaacaccac agaggggcat   780
ttgtgcgttt gtaaagaagg tcctgttttc aatataaata aactattatg gcagatttaa   840
```

<210> 248
<211> 306
<212> DNA
<213> B.fragilis

<400> 248
```
accttatgtt gcgaaatggt aaaagctaag aaaattttct gtgttgtagc atacgatatt    60
caagatgacc gaagtcgtat acaaatatca aaaatattag aaaagtatgg aacacgtatc   120
aactatagtg ttttttgaatg tatgtttaca gacagacaat ttcagaagat ccaaattaat   180
ttagaaagat ggattaacag gcgttatgat actgtggtat attatccgat gtgcatcaat   240
tgctatacaa gaattatata tcaacctata cgaaaaaaga taattaaaac cgtcgaaata   300
gtctaa                                                               306
```

<210> 249
<211> 744
<212> DNA
<213> B.fragilis

<400> 249
```
gattgtttta ggcaaaaata cgggtttctc ttcaaatatt tgtacttttg cgaaaaatta    60
aagattatgc gtatcgatat tataacggtt ttgcccgaaa tgattgaggg cttttttcaat   120
```

```
tgttctatta tgaaacgggc ccaggacaaa ggactcgctg aaattcatat tcacaattta    180
cgtgattata ccgaagacaa gtatcgccgg gtggatgact atccatttgg aggttttgcc    240
ggtatggtga tgaagataga acctattgaa cggtgtatta atgccctgaa agcagagcgt    300
gattatgatg aagtgatatt taccacacct gatggagagc agtttgatca gaaaatggct    360
aatagtttgt ctttatccgg taatcttatc attttatgcg ggcattttaa aggtatcgat    420
tatcgcatcc gggagcattt gatcacaaaa gaaatcagta ttggagatta tgttttgacc    480
ggcggtgaat tggctgccgc cgttatggcg gatgctatcg ttcgaattat tccgggtgtg    540
atttctgatg aacagtccgc cctttctgat tctttccagg ataatttgtt ggcggcacct    600
gtttatactc gtccggcaga atataagggg tggaaagtac ccgagattct gctttcaggg    660
cacgaagcga agattaagga atgggaactc caacagtcgt tggaacgtac taggagactg    720
cgtccggatc tgttggaaga ttaa                                          744
```

<210> 250
<211> 840
<212> DNA
<213> B.fragilis

<400> 250
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atatttataa gtaaaatggc aagagaagct aaaaatgaac cgaaagagtt gacagtggaa    60
cagaagttga aagctttgta ccagctgcaa acaacattat ctaagattga cgagattaaa    120
acgttgagag gtgaacttcc attggaagta caagaccttg aagacgaaat tgccggtctg    180
agtacacgta tcgacaaaat caagtcggaa gtagacgaac tcaaatcagc tatcgccggt    240
aagagagtgg aaattgaagc agccaaagct tcggttgaga aatataaatc acagcaggac    300
aatgttcgta taaccgcga atatgacttc ctgacaaaag agatcgaatt ccagtctttg    360
gaaatggaac tttgcgagaa gagaattaaa gaatttactg cagaagagca ggagaaatct    420
gaagaaatag agaaaaatac caaagcgctg gaagaacgcc agaaagacct cgaccagaag    480
aagaatgaac tggatgaaat catcgaagag accaaacagg aagaagagaa gttgagagac    540
aaagcaaaag atctcgagac aaagatagaa ccccgcctgc ttcaatcttt caagcgcatc    600
cgtaaaaatt cacgtaacgg tttaggtatt gtatacgtac agcgtgatgc atgtggtggt    660
tgtttcaata aaattccgcc tcagagacaa ctggatatcc gttcacgtaa aaaaattatc    720
gtttgcgaat actgtggacg tatcatgatt gacccggaac tggcaggtgt agaaatagaa    780
cacaaagtag aagaagcacc ggttaccacc aaaagagcta tcagaagaaa agctgaataa    840
```

<210> 251
<211> 1359
<212> DNA
<213> B.fragilis

<400> 251
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tatttatcaa gccaaaaaat ggctgtcgca cggggaaggc tatcggcctc ttcctgcaat    60
tcatcttctt catcgatagg agatatagta gcttctttgt gttgctggca tgaaataata    120
aagaaaaaag agagaagtaa cggtaaaaat gccttcattg gtttgagtct ttataaatta    180
ggaggtaaat atattaaaaa atcaataaaa gcaaggcaag gtgctatctt tttcttatat    240
ttgcaggcaa attttctact aaaaatgaaa attaaagaaa tagtaagcgc ccttgaacgg    300
ttcgcgcctc tgccattgca agacggattt gataatgccg gcctgcaaat cggattgaca    360
gatgcggaaa caacaggggc tttgttgtgt cttgacgtta ccgaagctgt gttggatgaa    420
gccatcgcgt ccggatgtaa tctcattata tcccatcatc ctcttatttt taaaggttat    480
aaatcaatca ccggtaaaga ttacgttgaa cgatgcattc tgaaagcaat caaaacgac    540
atcgttattt attcggccca taccaatctg gataatgttc cgggcggagt caatttcaag    600
atagccgaga agataggatt aaaaaatgta cgtatactcg accctaaaga aagcagtctg    660
ataaaattag tcacatttgt tccgtctgcc caggctgaag aagtccgtaa tgctttgttc    720
acagcaggat gtggatgtat aggcaattat gattcgtgta gttataatac agaaggggag    780
ggaactttcc gtgcacagga agggagccat cctttctgcg gaacagtggg agaacttcat    840
cgcgaaacag aagtgcggat tgaaacgatc ctgcctgaat ataagaaagg agaagttatc    900
cgtgcattgc tttccaaaca tccatatgaa gaaccggctt atgacttata tcctctccac    960
aatagtttgg cccaagtcgg atcaggaatt gtcggtgaat tggaagaacc ggaatccgaa    1020
ctcgaattcc tgaagcgaat aaagaaaata ttcgaagtcg gatgtttgaa gcacaacaaa    1080
cttacaggcc gcctgattca gaaagtatcc ctttgcggag gggcaggagc tttccttatt    1140
ccgcaggcag tccgtagcgg agctgatgtc tttatcacgg gtgaaattaa atatcacgac    1200
```

```
tatttcggtc gtgaaactga catttttgctt gctgaaatag gacattacga aagcgaacaa     1260
tatacaaaag aaattttttta ttctataata cgggatttat ttcctaatttt tgcactccaa    1320
tttagtaagg taaacacgaa tcccattaaa tatttataa                             1359
```

<210> 252
<211> 192
<212> DNA
<213> B.fragilis

<400> 252
```
acatataatg gtgaagaaca atgtgaagaa ttgtgttttc atattcaatg caaatttgta      60
aaaggtgata tggaagtcat ttgcatgaat atagcactca attatgcaaa tgtgtcaaga     120
agtaaaatga atcaagaatt actcagattt atcgggtaca tctcttttaa ttgcgtatcc     180
gtgttaatct ga                                                         192
```

<210> 253
<211> 1191
<212> DNA
<213> B.fragilis

<400> 253
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gtagcgagtg gcatttatta ctattggtgt agtgtccgtt cgctatttat gatttattct      60
ttaaaaacta aaaaaatggg aataatggtt ggtcttccta cttcaggagg cacagagaaa     120
gatttgcaat tgaactttgg tttaactgtt aatgatcaag tagagatgtt agcccccttc     180
ttgcctgcag agtggtttct gcaaagtggt atacaactaa cttggccgca tgccgggaca     240
gactgggcat atatgttggc tgaagttcag gaatgtttta taaatatagc ccgtgagatt     300
gcgaaacgtg aacttttgct tattgtcacc ccctatcctg aggaggtgcg taagcagatc     360
attggtacgg tgaatatgga taatgtacgt ttcctgaagt gcgacacgaa tgatacttgg     420
gcgcgcgatc atggagcaat tactttgatg gatacaggtg gagcaagttt gctggatttt     480
acttttaatg gttggggaga aaagtttgag gctcgtttag ataatcagat aactcgccgg     540
gcagtagaag ccggtgcact gaaagggcaa tataaagatt gtctgaattt tgtactcgaa     600
ggtggttcca tcgaaagtga cggagccggt actttgctca caacttccga atgtttattg     660
tctccacatc gtaattcgcc gatgaatcgt gttgatatag aagaatatct ttgcagagta     720
ttccatttac aacgggtttt atggctcgat catggatact tatcgggaga tgatacggat     780
agccatatag atacattggc tcgctttttgt tctccggata ctattgcgta tgtaaagtgt     840
accgactctg aagatgaaca ttacgaggcg ctatgcaaaa tggaagagca attgaaaacg     900
ttccgcacta catcaggtgc tccttatcgt ttattggcat tgcctatggc agacaaaata     960
gaagtagagg gagagagatt gcctgcaacg tatgccaatt ttttgataat gaatgatgtt    1020
gtactttatc cgacttataa tcaaccggaa aatgataaat tggcgaaaga agtgctgtgt    1080
gaggcttttc cgacatacga agtggtaggc attgattgcc gtgcacttat taagcagcat   1140
ggatctttgc attgtgtgac gatgcaatat ccgacaggag tgattaaata a            1191
```

<210> 254
<211> 2448
<212> DNA
<213> B.fragilis

<400> 254
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aaacccggcg gaagtagtaa aaacagaata aaaaaatcta ataatatgat acaacattat      60
tttaaaattg catgtagaaa cctttttaaaa tataaggtac agaatatctt aagtattgta    120
ggcttgtcta tcggtttttac agctttcttg ttaggcgggt attggcatta ctgggaatat   180
catttttgata gtttccaccc tcaaagttca aggacttatg cccttgactac caccggtata   240
tttaaaacag ctgacggatc tgtaggagaa ttaaaccaga tacatcagat ggtggaaaaa    300
gatctggtta ctttccctga aatagctaaa gtttgccatg tcagcaaagt aaaatacgaa   360
tttgagaagg atacaaaaag ttggatcgga atgaaaatag actccacttt cttttgatatc  420
tttcaatgta aactgatcga agggagctat tataaggttc catttaacgt aaatcatgtg   480
attctgactc aaaaaatggc caacttctac tttggtgaca gtagttgcgt agggaaagag   540
ttgaaaatca acgacaaatt atcatatacc attgcgggag taatggaaaa ttatccccaa   600
aacagtgatt tcaaatttga atacctgatt ctggccactc catcccccaa tcaagtcaaa   660
```

```
agaaatacga cttatgtatg gttacaccct tcggccgatg ctgcacatct aagtaaaaag    720
atagcagcct acagagtcaa agaacccgat accaaatgga gtaaatattc tgaatggcgc    780
tttcatttgc gtccgttacc cgaaattcat acccgctgct ctcctgagct gaaaggcagg    840
cttcaacata tccggatttt ggctacggcg ggaatattgg catttgccag tgcattaatg    900
aatctgcttg ttctattcat tggccagcaa caacgaaaag cacgctataa tgccactttt    960
tccactctcg gtgcttccat ctacagtttg ataggggaaa acttacttga attgaccctc   1020
cccctgttca tagcattttt gctttcaatg gcatttatcg aattcctgtt tccgtttttat  1080
aaggattaca ccagtttggt agcagagagc agtagctatt ataatggagt catccagagt   1140
atcacccgac aagaagtact gaaagcatcc tattggattt atccgttatg ctgcctgata   1200
tttctggttt taagtacggt tcccatcgtc ggtctgctga aacgaaacag tcggggaact   1260
tcgctggcac ttagaaacgg attgataatc ggacaaatct tcatcggctc tttattcctc   1320
ctgacttctt gcatgttcta cagtcagtac cgattcatga ccgtacagae caaaggactg   1380
gtcaccgatc acatctggca gatcgacctc ggattcgatg caacctacaa tactgattgt   1440
acccctttta tagaagcact aaaacaaaac tcagccatcg atgacgtaac ggccctgaca   1500
cagcctctcc ttgttttaag aggagagtgg tattgcagtt ttatcactca atttcccata   1560
gagggacgta ataatgtaga tgaagcaaca gaagataatt gcatcgttgt gcaaaagaat   1620
ttcctttcct ttttcggaat gaagatgaaa gaaggagaat ggatacagga tcaggggaca   1680
agagatatag ttatcaacga aaccggtgcc cgcgaactca acattccttc actgacagga   1740
cgtcttatac tcagtgatga cgaagattcg gagaatcatg cagtacccac cagaatcagc   1800
ggtattttac gtgatttcta ctactgtccg atgcagtacc cgctgtcgaa ggtcttcttt   1860
atgtatcaaa acaatgctga tgcagcaagg gggtacaatg gattcagata tttctatata   1920
aaggtacatc cggataatga aaaacaagca ctgcaatacg ccaggagaat ctattctcaa   1980
tacagcaaaa aagaaatctc cgaggatatg cagatcattc aactttccac cttaatggaa   2040
ctgttcaatc gtccggaaaa gacgatgttc cggatcttcc tgttgttggc agtactctgt   2100
atcctgattt cttctttcgg cgtttttcttc ctggtatcgc tctctaccga acagcgtaaa   2160
aaagaaatag ccatccgaaa ggtaaacgga gcacaatttt cagatatcct atacttattt   2220
ctgaaagaat atttatggct gacactggtc agtaacgcaa ttgctctgcc tttaggatat   2280
ttatttatca aaaggtggtt ggaaacctat gcgtaccata ctgatattca cggatggctg   2340
tttgtatgtg tattcctctt cacctgcatc atcgttattc tctcggtcat gcgacaagtg   2400
gtagtagctg ccaaaatcaa tccggcggag tcggtgaaaa gtgaataa             2448
```

```
<210> 255
<211> 1191
<212> DNA
<213> B.fragilis
```

```
<400> 255
ctattcatgg gattattaca agagaagtta gctaaatacg acctccctca gcagataaag     60
gctaaaggcg tatatccata ctttcgttgt atcgaaagtg aacagaacac agaggtgata    120
atgagtggca gaaaggtgtt aatgtttggc tcaaactcat acttaggcct gactaatcat    180
ccgaaagtaa ttgaagctgc tgttgaagct acccgcaaat atggtacagg ttgcgccgga    240
tcgcgttttc tgaacggtac actcgacctc catcttcaat tggagaaaga attggccgaa    300
tttgttggta aagaagatgc tatcatttat tctaccggat ttcaggtaaa tctgggtgtg    360
gtttcgtgtg tgacaggtcg tgaagattat gtgatctgtg atgaacttga ccacgcttct    420
attgttgaag gacgccgcct ttcttttttct accattctta agttcaagca taacgatatg    480
gaatctcttg agaaagagtt gcagaaatgt cgtcctgatg cagtgaaact gattgtagta    540
gatggagtat tcagtatgga gggtgatatt gccaatttgc ctgagatcgt ccgtttgtct    600
aaaaaatatg atgccaatat catggtagat gaagcgcatg gtctgggagt tttgggtaat    660
cacggacgcg gtacttgtga tcatttcgga ttgactaaag aggtggatct tatcatgggc    720
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aattatttgc gtcacaattc acgttcatat atctttagtg caagtaatac gcctgctgct    840
acagctgccg ctcgtgctgc acttcagatt atgaaaaacg aaccggaacg tattgagcat    900
ttgtgggata taaccaatta ctctttaaag tgtttccgtg aacttggttt tgagatcgga    960
catacctcca ctcctatcat tcctctatat gtacgtgata tggagaagac atttatggta   1020
actaagatgt tatttgacga aggtgtgttt gtaaatccag ttgtgcctcc cgcatgttct   1080
ccgaacgata cgttgattcg tttctcgttg atggctacac actctaaaga acagattgat   1140
tttgctatcg gtaagttagt gaaatgtttc aaggcacttg atctttttata a           1191
```

```
<210> 256
```

<211> 570
<212> DNA
<213> B.fragilis

<400> 256
```
tttgtttttta tgagaaaaag taatgatata attttttatt cgttgttagc attgtgtcta      60
tttactaact gtctgtttat aggatactac tattaccaac aaaacaggga agtactgttg     120
gggcaagagt tggaacatca gaaaaaacaa aattatgaat taatagttaa tcaaatagaa     180
tcagggatta ttccacatgt aatttctgat aaaaaagaat ttgcaggata ttttgtcctt     240
gtgtttccta atggtatttg tgatgtttgt aataaatggt tgtttaaaca aatctctgaa     300
ttatccagta cttcggattt agtggtggtt gtccctgata aattgaagaa gaatatggaa     360
atctataata ccgtttataa acttaagttg tcgtctattt tttgttcgga aaagtatgcc     420
atgcctcagg aggaatttaa agatatgaca tatatattct attgctcaaa aactggaacg     480
gttttatatc ctttggcact tcatcataaa aatatagact tggacttgta cttttaaatta     540
gtaaagtcaa tagatttaga tttcttgtaa                                      570
```

<210> 257
<211> 786
<212> DNA
<213> B.fragilis

<400> 257
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tggaatctta tgaaaacaaa gcaagaaatc gtagctaatt ggctaccccg ttacaccaaa      60
cgtaacctgg aagactttgg agagtatatc ctgttgacta acttcaacaa gtatgtagaa     120
atatttgcag agaaatttaa tgttcccatt ttgggtaaag acgccaatat gatctctgcc     180
agtgcagaag gaatcacaat catcaacttt ggcatgggaa gtcccaatgc cgccataatt     240
atggatctgc tgagtgccat ctctccaaaa gcctgcctgt ttctgggaaa atgtggcgga     300
atcgataaaa aaaataaaat aggtgacctg attctgccaa ttgccgctat ccgtggtgaa     360
ggtacctcaa acgactattt cccgccggag gttccgtccc tgccggcatt tatgctgcag     420
cgtgccgtat catcggctat ccgtgactat gctcgcgatt attggacagg aacagtctat     480
acaaccaacc gccgtatttg ggagcatgat gacacctta aagagtatct gaaaagaact     540
cgtgcaatgg cagttgatat ggaaacggca actctgttca gttgcggttt tgccaatcat     600
atcccgaccg gagctttact actcgtatcc gaccaaccta tgattccgga aggagtgaaa     660
actgataaaa gcgacaacat cgttaccaaa aactatgtag aggagcatgt agagataggc     720
atcgcctcgc tacgaatgat cattgatgaa aagaaaactg taaaacacct gaaattcgac     780
tggtaa                                                                786
```

<210> 258
<211> 1395
<212> DNA
<213> B.fragilis

<400> 258
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cagctactta tgaaaacagt ccgggaaact atactggagc ccataatcaa tattgtacaa      60
gtcccaaaaa tgctacagga tgtgtttcgg atcctgatcc aacccgcact tgttcatatt     120
caattttttg taaaaaataa tagttacttg ttcaaatgtt accggaagag gtgttttcct     180
cttccggttt attctaataa tatgttagtt atgaagtact tgaatttgtt tatattcgtg     240
ttgttgttgg caggatgtaa tcgacctgtt aaacactccg atattatcca agccgatact     300
atggtaagta tcatacccca agaggatact atcacattat ctgctctctt ttctagatgt     360
gaaattgtaa aattgaatga tattgtttta gcgtcaataa ataaagtatt aaatacgat     420
tctttgtgga ttgtgcaagg aaagtctgat cagggtgggg tccatttgtt taataatgaa     480
ggccgatatt taaaaaccgt tttgaaatgg gggcagggac ctgaagaagc atatgatatt     540
tggagtatta aactattaga tggatctatc tatttattga ttaattctgg aacagaagtt     600
gtggaatatt ctttgcagaa acaaaaaatg gtagagcgct ttcggctacc gtctgagata     660
ctttcagcta cagattttgt tgttgataat ggtggaaatt atatattctt aaaatcgatc     720
tcccgagaga aaaaaaagga agagtataaa ctttatgtgt ataataagaa agaggggaca     780
atcgtaaata gaatattgaa tatggataaa aagtctagtg agtatatttc ttttgatcaa     840
agtgattgtt tatatcgtgt tcaggatgaa atctattatt acgaggtttt tagaaatggt     900
atttgtcggt tatctgctaa tgatatgact ggatacatcg ctttttaaaca aaatgaatat     960
```

```
acttttccgg aaaaagaact ttataatgaa gatcatacat ttcagtcttt tatagatgtt    1020
tgtgaaaata gtccttttat ttgggcgcat cgtaatttat ttgaaggaga gcgctttgtg    1080
agttctactt atatgtataa aaaagaactg ttttggaata ttatagataa atctgattat    1140
agcgtacatt catataaatg ggtatatgat gacttgatat taaatgaggt tgtccctgtt    1200
gaagattatt tatatcgtgc taatgttcag gagaatatcc attattatac attgtctttt    1260
tacgattttg atagaattat gcagttgaaa aagaagtgta aaaaaagcgt aggagaaaag    1320
tggatggtaa aactagatga tatgttagat gaaaattcaa atgatataat agtttgtttt    1380
tatgagaaaa agtaa                                                      1395
```

```
<210> 259
<211> 1416
<212> DNA
<213> B.fragilis
```

```
<400> 259
cctaagctta tgaaactacg aataggaagt atcacgttct tgctgtttct ttcatccgtt     60
gcctttccac aggccacgag ccgctatctg gacaaaccat taccacaagg atgggaagaa    120
gatacacaaa tatttcagca agtattgcca gtggacgacc aatggtggaa agcatttcag    180
gaccccgttc tcgactcact catctccgtt gcagtcaagc agaattattc ggtactgact    240
gcgattgatc gtatcaatat ggcaaaagcc aacttaagaa tggaacgtgg aaattttttc    300
ccaacaatcg ggttgaatgc cggatggacc cgccagcaaa gcagtggcaa caccagtgac    360
ttgccacaat cgactcaaca ttattatgat gcctcgctca atatgagctg ggagttagac    420
ctctttggaa gcatacgcaa tcgcgtaaaa gcccagaaag agaactttgc ggccagtaaa    480
gaagaatata ccggcacaat gatatcactt tgtgcccagg tagcctcagc atacatcaac    540
ctgcgggagt tgcaacaaga attggccgta gtgcaaaaga actgtgcatc ccaagaggcg    600
gtattaaaaa ttacagaagt aagatacaac accggactcg tatctaaact ggatgtggca    660
caggctaagt cggtgttctt cagtaccaaa gcatcgattc ctcaaatcga atcgggcatt    720
aatcaataca ttacgaccct tgccatacta ttgggtactt atccccagga agtgcggcca    780
gctctaaccg ctcccggaac attaccggac tatatggaac ctatcggagt ggggcttccg    840
gccgatttgt tacttcgccg cccggacata cgcagtgccg aacgaagcgt caatgcacaa    900
gccgctttag taggagcgtc taagtcggac tggttgcctc aggtctttct aaaaggatcg    960
gttggttatg cagcaaagga cctgaaagac ctgacccatc ataaaagtat gacctatgaa   1020
attgctccgg cactgagttg gacgcttttt aaaggaactc aactagtgaa tgctaccaaa   1080
ttggccaaag cacaattgga cgaagctatc aaccagttca atcagacagt attgaccgcc   1140
gtacaagaga cagacaacgc tatgaacgct taccggaatt ctatcaagca aatagtagct   1200
ttgcgcgaag tgcgcaatca gggacaagag accctgactc tctcgctgga actttacaaa   1260
caaggattga ccccattcca gaacgtactg gatgcccaac gctcactgct cagttatgaa   1320
aaccagctgg ttcaagccag aggatattct ctgctgcaac tgatagctat gtaccaggca   1380
ttgggaggcg gatggtccgg aaacctgaat aattaa                              1416
```

```
<210> 260
<211> 408
<212> DNA
<213> B.fragilis
```

```
<400> 260
aataacatta tggcacatcg tcttaacact aacaagcaat ttatggtagg aaacggcatt     60
ttggcatttg ccgtcatatt tgtcgtggtc atctttgtat atatgagttt aagattacaa    120
cgagaaaaag aagctaatcg tcattttagt gaaacatact ccattcagtt gacaaaaggc    180
ttcgtgggtg attctatttc actgtttgtt aacgacagtc tgatcatgaa taaacagatc    240
aaagaggaac ctactgccat cgaagtcgaa cgcttcgcag agcaaagtgc actgatgatt    300
gtaaacaatc aaactgaaac agtagccgca tttgacctaa gtgaaaaagg aggtacttac    360
cgttttgaaa aggatattga cggtatcaaa cagctgccac aaaaatga                 408
```

```
<210> 261
<211> 192
<212> DNA
<213> B.fragilis
```

<400> 261

```
aagttgatta tctggttgtc agtaatggga tgcaacacta ttgttgccgg atggattatg      60
atactcaaag ttattcgttt ctgtcggata ttccggatta tgacgcttta taaaattaac     120
aatgttaatg actctttccg gcatctatta tcctctttcc aggaagttaa tatcgtaaat     180
gcaagaagtt aa                                                          192
```

<210> 262
<211> 459
<212> DNA
<213> B.fragilis

<400> 262

```
tgttattcta ttctttttat aatatccgtg ataaagatag tgatttgttt tattcattac      60
aagaataacg ataccttttgc tgaaattaac tgtgaaaaac gaatggtaat gtcttggggg     120
aaaacaattc tcggttgttt gattggaggg tatgcccttc ttggtttgtt aggggggaac     180
tatgcatatg aacaagaagt aaaggcattg catgtatatg cggatagtgt ttttcatgaa     240
gctttcatg tagaattgca aaaacgaggt atggatcaag tggaaagttg gagatatgga     300
tgtgaagact ctttcgtctc ttcagtggat acagccttca aaaaagttac tatacaggac     360
gagtacggta cgtatagttt tcgggttgat gcaatgaaga ttcgcaaaaa tatcgtgtct     420
tcccctggag agcaaggact gcatactgtt gttgtttaa                            459
```

<210> 263
<211> 378
<212> DNA
<213> B.fragilis

<400> 263

```
gctatgaata tagaagaatt tagagaatat tgcctttcat ttaaaggtgt gcatgaccgg      60
atgcccttta aaaaagcaac atctgaatat gatagagatt tactcgtctt ttatgtaatg     120
gataaatggt tctgtttttgt gaatatagac gcattcgatt tctgtaatat aaaatgtaat     180
gccggacaga tagaggattt gctagacaaa tatgaaggag tacaaccggg ctatcacatg     240
aataaaaagc attggattag tgtctatttt gataaagacg ttccggataa aatgattaag     300
gacctggtaa agcaatcgta tgaaattgtt gtatcttctt tggcgagacg agagagggaa     360
atattacaag ctatgtaa                                                   378
```

<210> 264
<211> 744
<212> DNA
<213> B.fragilis

<400> 264

```
acatcgattt tcttgctttt ctgcttttta ttaccgaata ttgctatcat tacaaccata      60
acaattacaa atgatatgaa aaacacacat gtacttctta taaaatttaa aaataaaata     120
tctgatgatg aagttcaatt ctttagaagt tcaattatac aaaaactggg tgaccagcca     180
gatatattat accacaatca tgtagagaaa aataaatatc gctactctta tcccttaata     240
caatacaaga atatcgaaca acaagcaaca atcgtatgta ttgatcaagg aacaaaagca     300
attgagaaat tcttttcaca atgtgatttc aactttcaac tgggaaatag aaaagtcaat     360
atgaagtttg cctctgtaac tccttacaaa ctattgattg aacgacaatc aaaaatgata     420
aattatcata ttcataactg gttgccttta aattcggata actacaaaaa gtatcaaaat     480
attagcattc tttcagaaag aattaatttt ctggaaaaga ttttgatagg taatatatta     540
tcatttacaa aaggagtcaa ttatttatt gactttccac tacaatgtaa actccttcaa     600
cttagtttttg ccaaactaat atctaataaa aatattaaat taatgtcgtt tgatgcagat     660
ttccaatgta atctaaatct tccggattat attggaatag gcaaacatac aagcattgga     720
tatggtacga taactcgaaa ctaa                                            744
```

<210> 265
<211> 1152
<212> DNA
<213> B.fragilis

```
<400> 265
agacttgtca taatgaaaaa actaatgtat attttcctca tcctcccttt gataatgagc      60
ggatgtaaag ggaaaaaaga aaccgaaaga ggagggatgc ctactccgga aatcagtgtg     120
gcatatccac tcgtacaaaa cattacccta acaaaagatt atccgggata tctgactacc     180
gaacaaacag taaatctggt agccagagtc aacggtgcct tgcagtccgc ctctttcaca     240
ccgggaactc gtgtgaagca ggggcaactc ttattcgtaa tcgaaccaac gatctacaaa     300
gataatgtaa ctcaagccga agcccaactg aaaaccgcac ttgcacagtt ggaatatgcc     360
cgtaacaact atagccgcat gaaagaggct ctaaaaagtg atgcggtcag ccgtatacaa     420
gtattacaag ctgaatcgaa tgtagccgaa gccactgcag cagtcagcaa tgccgaagcc     480
actctgaata ctgcacacac caatctgggc tattgctata tccgtgcccc tttcaacgga     540
actgtcagcc gctcgcttta cgatgtgggc agctatatca gcggagccgc acaacctgtc     600
actttggcta cgatctataa agacgaccgc atgtacacct attttaatgt tgccgacaac     660
caatggcttt caatgctact ctctcaaaac ggtaaagaaa aggaactccc caaaaatgtc     720
atcgtgcgcc tgggtgagaa cggcacacaa aactatccgg ccacattgga ttatttatcg     780
cccaatgtcg acttgaacac aggaacactc aacgtgcgcg ccaatctgga taatccgaaa     840
ggtattctga aaagcggact atacgtcagt atcacattgc cttatgccga ggcaaaacaa     900
gcagtgcttg ttccggaagc ttccatcggt acagatcagt tggggaaata cctatacatc     960
gtaaacgatt cgaatatagt acgctacagg catatcgaac cgggacaact ggtcaatgac    1020
acattgcgcc agataaagag cggactttca cccaaagaac aatatgtcac cacagcactg    1080
atgaaagtac gtgatggcat gaaagtcaag cccgtatcag tcaatcacga gtcaccaacc    1140
tctaatcgtt aa                                                        1152

<210> 266
<211> 1239
<212> DNA
<213> B.fragilis

<400> 266
cacatttgca taattgagtg ctatattcat gcaaatgact tccatatcac cttttacaaa      60
tttgcattga atatgaaaac acaattcttc acattgttct tcaccattat atgtttatca     120
ctccaagcac aacaaccctg tattattgaa ggaaacatca atgggattcc tgatgggacc     180
gttatcagta tgatgcgtca acagggaaca ggtatgaaac gaattgccaa cgatacaatc     240
gataatggaa agtttaagtt cattatacat actcttaata atcagactga agctttgaga     300
atagtaagta aaggagaagg ctttcccaat acatggctgg acgtatatgc ctctccggga     360
gaaacggtat ccatcatcgg cagtgataaa ctactccgta catggaatat agtaagtaac     420
atcaaagagc agcaagaaga aaatcaatac acaaatgagg gtttccgcaa tttgacagac     480
caaagacaac gattacaagc tttatcatca gatatgtgga aaaagatagc tatatcggat     540
tcacctaaag agaaaataca aatgacggac agcatccaaa atatactgta tccccaacta     600
gactccctcg agctgttact gtccaaagaa gaaatcaatt taatgaagaa tcttcctgtt     660
acctctattt ggctagatca tttggaagca ttaagccgtc aatctgtcta tctaaaaggc     720
tttcctatct cagaagctca agtattgtat cagcaactaa catcaacaca acgcaactca     780
caaataggaa aaaagataga agcttgttta acgcctacaa aagctaagat aggtgatgac     840
atgccggata ccgagctgtc aaatatcgat ggaaaccacc accgtctatc cgattataaa     900
ggaaaatacc ttttacttga tttttggagc agaagttgtg gacactgtat tgaatcactt     960
cctgagatgg aaatcttatc cgatatgtgg aaagaaaaag taacttttat cggtataaat    1020
attgatgatg agaaatcatg gaaagaattc tctcaaagaa agaatatcaa atggatcgac    1080
ctaaatgatc ccaaaggggc attcggattg tatatccgtt acaaagcaaa tggcactccc    1140
ttttatgtac ttgtaacgcc tgatggaaaa attactgata tttggtacgg atataataaa    1200
gatagcctct ccgaaagact gaaacaaggg ataaaataa                            1239

<210> 267
<211> 636
<212> DNA
<213> B.fragilis

<400> 267
atatactgca tgaaacagct tattgattta gaaaattgga atagaaaaga acattttaaa      60
ttcttttctg cttttgacga cccattcttt gggatcacta ctttggtcga ttttacgaat     120
```

```
acctaccatc aaagcaagga tgagaaaaag tctttctttt tgtactctgt acattttctg    180
ctgcaatgtg taaatgaagt agaggctttt aaattacgca ttgaaggcga acaagtagtg    240
aaatatgatt ttatccattt atcacctacc ataggacgtg aagatggaac attcggtttc    300
ggttttttcg aatacgatgc agaccttgaa gtatttatac aaaatgctga aaaagaaata    360
gaaagagtga aaaacagtac tggcctgtct ttttccgaaa atataggccg gttagatctt    420
atccgctatt cggctttgcc ttggttcgca ttttcagaga tgaaacatgc tgtttctttt    480
ggcagaggtg attctgtacc gcgcatttcc actggaaaat taataaaaga gaatggtgta    540
tacctgcttc caatttcaat ttccggtcat cacgctctta tggatgggcg taatgtggca    600
gaacttatcg agaagttaga aacaacaaag aaataa                             636
```

<210> 268
<211> 432
<212> DNA
<213> B.fragilis

<400> 268

```
accgtcttaa tccttattat actggaatac atctacatat tgatgttatg gagtgtcttg     60
tgtcaaaggg gaagaagtct taatccttat tatactggaa tacatctaca taaagacgaa    120
aacggatatt acatcaaaag tgttacacgt cttaatcctt attatactgg aatacatcta    180
catctaaaca gggcggcgaa gaagttgaac tgcttttgtc ttaatcctta ttatactgga    240
atacatctac atgaaaagga gaaggatgag gttggtgaaa tgacaagtct taatccttat    300
tatactggaa tacatctaca ttgtttgtgt ccatccgtg aagaaggcta tcggcgtctt    360
aatccttatt atactggaat acatctacat attacttgtt tgggcagtta tctgtcttgt    420
atcgtgtctt aa                                                       432
```

<210> 269
<211> 285
<212> DNA
<213> B.fragilis

<400> 269

```
caagtcttaa tccttattat actggaatac atctacattg tttgtgttcc atccgtgaag     60
aaggctatcg gcgtcttaat ccttattata ctggaataca tctacatatt acttgtttgg    120
gcagttatct gtcttgtatc gtgtcttaat ccttattata ctggaataca tctacatgtt    180
acaatcaaca atcaggatat gggccttggt gtcttaatcc ttattatact ggaatacatc    240
tacatgaaca gtgacatcct ttaccggacg ccacacgtgt cttaa                   285
```

<210> 270
<211> 420
<212> DNA
<213> B.fragilis

<400> 270

```
aagctagaaa tgaaaatcag taagaagcaa attgagtacg ctattgaagc actcagagcg     60
aacaatatta tcaccaacga caatcaatat cccaaggtct ttaagggata tatctcttcg    120
tttggagcag ctgtcatcca atccggcctg attccggcta ttatattctt tgaaaacgaa    180
gataatgatg ccaacgctga cagacataaa atcattggag ttttaaaaga tatcatcaat    240
gctatgcgtc agcaatatac tgtaaccgat gcaaccatac ttgtgtcaag tcagattcct    300
gcaaattatt ctatggcaca gtatatcata gaacatggaa acactgatca actgctaaaa    360
gagataacag aagcagctgt tgccatgaaa ttagcattaa gaatgtacaa aagtgaatga    420
```

<210> 271
<211> 2250
<212> DNA
<213> B.fragilis

<400> 271

```
aacgaagaaa tcaatatatc tatgatacta cattatttaa agattgtttt caggcagatg     60
gctaaacgca aagtacaaac tgctatatct atattgggaa tcactgccgg tttgctctgt    120
```

```
ttcagtgtat gcaactatta taatcgtatt ttcagtacag gtaacaagga tttggcaact      180
tacgaaaatc aagcagaaat atgcataaaa gaaagatctt accaagtaaa tattccgata      240
gaggattttg aaaagaaaat aggtaaagac aaatttgaag cagttgcttt ttatgtaaat      300
tcttcatcta caatcacatt agatgaaacg atatattgta aagtggacaa aacagaatgt      360
aatgctgatt atttcaaagt atttcctaca gaatgtatag acggctcctt aaaacagttt      420
ggtatttcgg gtaacgaagc tgtagtaacg actgagtttg tcaaacaatt ctgtggaggc      480
gtcccgccgc tgggaaaaac gatccttaac cagagaggca aaatacatac cattattgcc      540
gttatcaagc cctatccggc agggatgaat aattatcaca gcagctacga tgttttttctt     600
ccactacctg aaaatgcttc atttgggata cacaaactac tgctcaaacg cccggaagat      660
gccgaacaca tttcacaatt actgcctaaa ttgggacttt ttcccaacca tccggaatgg      720
ataccacaaa tagtgctgga tagccagaca gaacataagg caggcgctga attatgggtg      780
gctattttgg ggctattggt cttattggta ggcatgatca actatttctc attcagtata      840
ggagcatttg ccaaccgtta caaagagatc agtctacgta atacgctggg ttctacttac      900
tggggacttt tcatattgct attccttgaa caggctgtca tcatcctgat ctgtggaata      960
attaccctgg ccattactga gagcttgcta ccttggttta taagtacatt ttctaatgaa     1020
atacaaagaa acttatacat agatatacat cgattgtggg tttatgaatg tcaatatata     1080
ggaggcttgt tgcttatcag cttactgatc tcattcatct cttcctggca cattgcccat     1140
aagacaatag cgcaaggatt gaggggggg acaactaccg gacaacgtca cataatccgt      1200
aacacgttac tgagcgtcca gctactcttc tcttttctat tcattgtagg tacagtcggc     1260
atccgtatgc aaatgaaaga atacgatctc tcagccaatc ccaatctgag cacagaggta     1320
aaaaagaaa ttatggtagt aaatataggc agatacgatc gtattcgaga gcatcaaccg      1380
gaactgataa acttcctgcg ctcacgccgt tggaatgccg aaacagccta cactaacagg     1440
gattacagcc aagagtatgg atttaccgaa ctctgcttcg tttcggatga ttattttaat     1500
ttaatgaaca tcaaatgcca tcacaaaccg ggagaacctt tttgttacgt aaacgaacaa     1560
ttataccaaa ctttgcaagc agattctacc tccgagtctt ttcgttttca aaaccaagta     1620
tatccggtta aaggtttagt ccatataggt cccgattctc caagtgcaaa gcaattggct     1680
cttttaccac tttctgccat gaatgacgaa atcgggaaaa tatatatacg attggtccct     1740
gatgctcctc gcaaggaagt aaaagcagaa atgagcaagg agatgaatca atatctacca     1800
cagaacgaac ctttcgagtt catcagttta tatgaggaac aaaccggatt aggaactatc     1860
tcggtgatgt ggctgttcgt tgtctgctct tccatttgct tagtgattac ggtacttggc     1920
gtttatggag ctatcagcat tgacactatc cgtaaacaaa aagaagttgc catccgtaaa     1980
attaatggtg cacgtttacc ggacatctat tggttgtttg ctaaaaacta cctgatttta     2040
tttttaatag cttcggtagt aggaggttta attagcctct cgtcatggt catcggcagc      2100
cagcatcgag tcatattgtt tgattatgcc gatccatggc tttggatggg tcccctcatg     2160
ctattaatag gcataataac agctacaatc agctggcaaa tatattatat tgcacggact     2220
aatccggcag aagtaattaa aaacgaataa                                      2250
```

<210> 272
<211> 426
<212> DNA
<213> B.fragilis

<400> 272
```
tgttgcggaa ttaaggataa atatctgcgt tccgaaagtg cgttgatgac cctgttgggg       60
atcgtttcta tcgtatgcgt cattatctct attttcggca tcttttcgca agtaactttg      120
tcgtgcgaac aaaagacgca aagagatcgct atccgcaaag tgaatggagc caccatagga     180
agtatcctgc agatgttcat caaagaatat ttcgtccttt tgcttgtcgc ggctcttata      240
gcattcccgg caagctatgg aatgatgaga gtgtggatag aaagttacgt cagacaaact      300
tccaccccat tttggatata tatcgtcctg tttgcaggta tcggtatcat catcgtcatc      360
agcatcttct ggagagtgtg gaatgcagcc aaacaaaatc cggcggaagt agtaaaaaca      420
gaataa                                                                 426
```

<210> 273
<211> 996
<212> DNA
<213> B.fragilis

<400> 273
```
cctttattga tacgtatgaa ataacttttt ggacaacaaa cgaccaaagt aaagcaactg       60
```

```
gctgataaga tcagtttttga tatctcgatg ggagtatata aatcgggaga ctcattgcct    120
tctattaatc agctcagtca ggcgtatgaa gtttcccgtg atactgtgtt taaagctttt    180
cttgatttaa aagaaagagg gattattgat tctactccgg gaaaagggta ttacgttgtg    240
gggagattga agaatgtatt gcttctgctt gatgaatatt ctccttttaa atatgcactt    300
tacaatagtt ttgtaaagcg tttgtctatc cgctataaag tcgacctgct gtttcatcaa    360
tacaatgaac gtttgttcaa taccatcatc cgtgaatcgt tggggcggta taataaatat    420
attgtgatga acttcgataa cgaaaaactg tctcctaatc tttataaaat aaatccatct    480
aaacttcttc ttcttgattt cggtaaattt gagaagagg gattttctta tgtttgtcag    540
gactttgatc aaggattcta taatgcgcta tttcaactgg cagatcgatt gagaaaatat    600
caaaaactcg ttttcgtgtt agtagatgat agtatgcatc cccggagtag ccgtgacttt    660
tttgagagat tttgtgccga tcaacatctt ggttgtgaag tggtgagtga tattgaggga    720
cttcaggttc gcagaggaga agtttatata gcaattcgcc aaatagatgt agtaagtatt    780
attaagaaaa gtagggttga gggattgcaa tgtggggttg attttggctt gatcggatat    840
aatgatacac ctgcttatga agtgatagat cagggaataa ctgcactaag tgtggattgg    900
gaaaagatgg gagataaagc tgctgagttt gtttttgcagg ggaaaaccat acaagattac    960
ttgcctacgg aggtcaggtt aagggcttct ttataa                              996
```

<210> 274
<211> 687
<212> DNA
<213> B.fragilis

<400> 274
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aaaattacga ttatgattaa gacaatcaat ttgcaaaaaa tcttcaagac cgaagaagtt     60
gaaacatggg cattaaataa cgtcagcgta gaggtaaaag agggcgaatt tgtcgccatc    120
atgggacctt ccggttgtgg aaaatctact cttctcaata ttctcggttt actggataat    180
cctacaggag gagagtatta tctgaacgga aaagaagtat ccaaatatac agaatcgcag    240
cgcaccaatc tccgcaaagg agttattggc tttgtattcc aaagtttcaa tctgattgat    300
gaactgaatg tatatgaaaa tattgaattg cccttactct acatgggtat ccggcctct    360
gaacgtaaac aacgagtgga aaaagcaatg gagcgcatgg ccattaccca tagaagcaag    420
cattttccac aacagctttc cggaggtcag caacaacgtg ttgccattgc acgcgccgta    480
gtagccaacc ctaaactgat tcttgccgat gaacctaccg gtaatcttga ctctaaaaat    540
ggtaaagagg ttatgggact attgagcgaa ttgaataagg aaggcactac catcgttatg    600
gtaactcact ctcagcatga tgcaggtttc gcagaccggg taattaattt attcgatggt    660
caagttgtaa cagaagttac tatttaa                                         687
```

<210> 275
<211> 630
<212> DNA
<213> B.fragilis

<400> 275
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agatacacga tgttacaaat agacaatgca tgcattgctt tcggcgagga tatactcttc     60
tcggaatttt gtatgcgact aaataaaggc gagacagctt gcatagcagg tcaatcagga    120
cgtggaaaaa cctctctact caatgcaatc atgggatttg tcccattaag aaaaggcaaa    180
atcaaagtag gaggtatctt gcttgaacct actactatcg atgccatacg cagacatata    240
gcttggattc cacaggagtt agccctgccc tccgaatggg taaaagaaat gatatcgctt    300
cctttttgcat tgaaagccaa tcgacacatc tcttttttcaa aagaaaagct tttcacttgt    360
tttgatgaat taggactgga caaagagctc tatcagaaac gggtaggcga aatatcgggt    420
ggtcagcgcc agcgcattat gatagccgtt gcagccatgc tggaaaaacc tttgattatt    480
gtagatgaac cgacatctgc actcgatgcc ggttccacag acaaagtttt agctttcttc    540
cgtaatcagg cagaaaaggg aacggctata ctcgccgttt ctcatgaccg gacattcgct    600
tacggatgta accagctaat cacactgtag                                      630
```

<210> 276
<211> 513
<212> DNA
<213> B.fragilis

<400> 276

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acgctttact tttgtgaatc aactaataag tcatacattt gtaaatcttc aaaggatatg    60
gaaataaaag ataggattaa aattatcatg gaaaaagaga atatggcttc cggtgctttc   120
gccgaaagca taggtattca gcaatccact ctctctcata ttttgaatgg gcggaacaac   180
cccagtttgg atgttattat gaaagtacat cagaaatata actatgtaaa attggaatgg   240
ctgttgtatg ggcaaggcaa tatatccgaa gaaagcatcc aatcagcttc tgattttcaa   300
ccttccttat ttgctgagaa tgccataatt ccgcccaacg ggacagttac tccggaaaat   360
cgcagggaaa tgccgttaga aagttcccaa aacaccccga aagagattgt aaaacaagaa   420
attagataca tagaaaagcc ttccagaaaa ataactgaaa taagaatttt cttcgatgat   480
aatacgtatg agacattcag aggagaaaaa taa                                 513
```

<210> 277
<211> 189
<212> DNA
<213> B.fragilis

<400> 277

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tttatttttg tgaaatatcc tccgtcaatg aatattccta ttgatgtgat agattcaatc    60
attttttggtc ttttttgtat tagtttcgag ttatcgtacc atatccaatg cttgtatgtt   120
tgcctattcc aatataatcc ggaagattta gattacattg gaaatctgca tcaaacgaca   180
ttaatttaa                                                            189
```

<210> 278
<211> 2061
<212> DNA
<213> B.fragilis

<400> 278

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aaaatatacg ttattatgca aaaaggtaat attggggtta caacagagaa cattttccct    60
atcatcaaaa agttttgta cagtgaccat gaaatcttcc tgcgggaatt agtatccaat   120
gccgttgatg ccactcagaa gttgaataca ttggcttcta tcagtgaatt taagggcgaa   180
ctgggtgatt tgaccgttca cgtttcatta ggcaaagaca ccattaccat ctccgatcgt   240
ggtatcggtt tgactgctga agagattgat aaatatatca accagattgc ctttttcggga   300
gctaacgatt tccttgaaaa atataaaaac gatgcgaatg ccatcattgg acacttcgga   360
cttgggttct actctgcatt catggtttcc aagaaggttg aaattatcac caaatcatat   420
aaagaaggtg cacaggccgt aaaatggact tgcgacggta gtccggagtt tacacttgaa   480
gaggtggaga aagcggatcg tggtacagat atcgtattgt atattgatga tgattgcaag   540
gagtttctcg aggagtcacg catctctgcc ctcctgaaga atattgcag cttcctgccc   600
gttcccatcg cttttggtaa aaagaaagag tggaaagacg gcaaacaagt agagacggcg   660
gaagataatg tcatcaatga caccattcct ttgtggacaa agaaaccgag tgaattgtcg   720
gacgaagatt ataaaaaatt ctatcgtgag ctttatccga tgtcagacga acctttgttc   780
tggattcatt tgaatgtaga ctatccgttc catctgaccg gtatcctcta cttcccgaag   840
gtaaagagca atattgattt gaataagaat aagattcagt tgtattgtaa tcaggtttat   900
gttacggatt ctgtagaagg tattgttccg gatttcctta ctctgctcca tggtgtgctc   960
gattcaccgg atattccttt gaatgtatcc cgttcttacc tgcaaagtga ttcgaacgtg  1020
aagaagatct ctacctatat ttcgaaaaag gtatcagacc gtctgcaatc tatctttaag  1080
aatgatcgcg ctcagttcga agagaagtgg aatgatttaa aaatctttat taattatgga  1140
atgctcactc aagaggattt ctatgataaa gcacaaaaat tcgccctttt caccgatacg  1200
gatggcaaac attacacctt tgaggagtac cagactttga ttaaagataa tcagacagat  1260
aaagataaaa acctgatcta tctgtatgcc aataataagg acgaacagtt tgcctatatc  1320
gaagctgcca aaaataaagg ttacaatgtg ctgttgatgg acgggcaact ggatgtggcc  1380
atggtaagta tgctcgaaca gaaactggag aaatctcgct tcacccgtgt agacagtgat  1440
gttgtcgaca acctgattgt gaaagaagat aagaagagcg atgtgcttga ggcttcaaaa  1500
caagaagctc tgtcagcagc cttcaagagt cagttgccga aaatggaaaa ggttgaattt  1560
aatgtcatga ctcaggcttt aggcgaaaac ggctctcccg tgatgataac ccagagcgaa  1620
tatatgcgcc gtatgaagga aatggccaat attcaggctg gcatgagttt ctatggtgaa  1680
atgcccgata tgtttaatct ggtattgaat tcagaccata aattggtgaa agaagtattg  1740
gctgatgaag aaaaagagtg cagtgctgcc attgctccta tacagacgga actggaagat  1800
gtgacaaaac gtcgtgatgc actcaagaaa aaacaagaag gcaagaaaga cgaagatatc  1860
```

```
cctactgcgg agaaagatga actcaatgat ctggataaga aatgggatga gttgaagcag    1920
cagaaagatt ctattttgc cggatatgca ggcaaaaaca aagtggtacg tcagttgatc    1980
gatctggcat tgttgcaaaa caatatgctg aaaggtgaag cattaaataa ctttgtaaaa    2040
agaagcattg agctgattta a                                              2061


<210> 279
<211> 402
<212> DNA
<213> B.fragilis

<400> 279
aatcactcag taaaaaagga gtgggaacta tcaagaatat ctaatataac aaatcagaag    60
agcatgaaaa aatatatact atcgagtctt acaattactt ttttgttact cagcatcaca    120
gcctgttcgc aaggaaagca aatcagtgga agttccaact acatcactaa aaatataaaa    180
gtcggttcat tcgaccaaat aaaatcgatg agtagttcag atattgttta tacacaaaaa    240
cagggcgccc ccaccgttca gatttatggt cccgacaata tagttgaatt gatggaaacc    300
tctgtcagcg gtcgaacatt aacgattaaa ttcaaaaaga atacctccat ccgtaatagt    360
gggaaactcg agatcagagt atcttctcca tcattaacct aa                       402


<210> 280
<211> 912
<212> DNA
<213> B.fragilis

<400> 280
agattattat taatactcat gatacagact agattgaaag gaatgggggt agcgctgatt    60
actcctttca aagaggatga aagcgttgat tacgatgcgt taatgcgact ggtagactat    120
ctgctgcaaa ataatgcaga ttttctgtgt gtgctgggaa ctacagccga aactccgacc    180
ttgagtgaag aagaaaaaaa gaaaatcaaa aagatggtaa tcgaccgtgt caacggaaga    240
atccccatcc tgctgggagt cggaagtaac aatacacgcg cagttgtaga gacactcaaa    300
aacgacgatt tcaccggagt agatgctatc ttatccgttg tcccttacta caataaaccc    360
tcacaagaag gaatttatca gcactataaa gcaattgcaa gcgctacaga gcttcccatc    420
gtattatata atgttccggg acgtacagga gttaatatga ccgcagagac cactttgcgc    480
attgctaagg actttcagaa tgttatagcc attaaagagg cttctggtaa tatcacccag    540
atggatgata tcattaaaaa caaaccggct aactttgacg ttatttccgg agatgacggt    600
attactttcc cgctgattac attgggagcc gtaggagtca tttcggttat tggaaacgcc    660
tttccacgtg aattcagcag aatgacccgt ttggcgctgc agggcgactt tgccaatgca    720
ctaaccatac accataaatt tacggaactg tttaacctct tatttgtaga cggaaaccca    780
gccggagtaa aatccatgtt gaacgctatg ggaatgatcg agaataaact ccgtttacca    840
ttagtaccga cacgcatcac cacatttgaa gcgattcgta aagtactcaa tgaactgaat    900
ataaaatgtt aa                                                        912


<210> 281
<211> 2236
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (16)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 281
ggatgcattc ttacanccccc gtggtgaata cgtactgctg gccatcctta aagataagga    60
taatctggca gcaacggttc ttgaagcgaa tcatgtgaat taccagcagg tattcgaaca    120
attgtcctta cagccggata tcagtgccgg catgggattt acagaagatg atgatgacga    180
agaagagatg aatcagtccc gttcgtccca tggatccggt gaacgtcagc aacaggcgca    240
gactgcctcc aggaagccga ctaatgatac tccggtgctt gataattttg gtactgatat    300
gactaaggcc gccgaggaag gccgtcttga ccctgtggtg ggacgtgagc gggaaatcga    360
```

```
gcgcctggca cagatattaa gtcgccgtaa gaagaataac cccattttga tcggtgaacc    420
gggagtcgga aaatcggcca tagtggaagg tctggcactt cgtattatac agaaaaaggt    480
gtcccgtatt ctgtttgaca agcgtgtggt tgcactcgat atgactgcgg ttgttgccgg    540
taccaagtac cgtggacagt ttgaggaacg cattcgttcc atcttgaacg aattgcagaa    600
gaatccgaat gtgattctgt tcattgacga gatacatacc attgtaggtg ccggatcggc    660
agccggatcg atggatgctg ccaacatgtt gaagccggca ttggcgcgtg gagagattca    720
gtgtatcggt gccactaccc ttgacgaata tcggaagaat atcgaaaaag acggggcgtt    780
ggagcgtcgt ttccagaagg taatggtaga gcctactaca gctgacgaaa cgttgcagat    840
tcttcgtaat attaaggata aatatgaaga tcatcacaac gtaaattata cggatgcggc    900
attggaagct tgtgtcaagt tgacagaccg ttatataacc gaccgtaact cccggataa    960
agctattgat gcactcgatg aagccggttc gcgtgtacat cttaccaatg tgagtgtacc   1020
caaggaaata gaagatcagg agaagttgat cgaagaagct aaaaataaca agaacgaggc   1080
tgtcaaatca cagaatttcg aacttgctgc cagttttcgc gataaggaaa aagaacttgc   1140
tgtccagttg gatgtgatga agaaagactg ggaggaacgt ttgaaggata tcgtgagac   1200
ggtggatgag gaagaaatcg caaatgtcgt atcaatgatg tccggcattc cggtacagcg   1260
tatggcacag gcggaaggca tcaagttggc aggcatgaaa gaagacctgc aatcaaaggt   1320
gatagctcag gacgatgcta tcaaaaagct ggtcaaggcc attctgcgca gccgtgtcgg   1380
actgaaagat ccgaataaac cgattggtac atttatgttc ctaggcccta ccggcgttgg   1440
taaaactcat ttggccaagg aattggctaa atatatgttt ggttcttcgg atgcattgat   1500
ccgtatcgat atgagtgagt ttatggagaa attcacagtc tcacgcttgg ttgggagcgcc   1560
tccgggatac gtaggatacg aggaaggcgg acaattgaca gagaaagtac gccgtaaacc   1620
ctattctatc gtattgcttg acgaaataga aaaggcgcat cccgatgtgt tcaatctgct   1680
tctccaggtg atggacgaag gtcggctgac tgacagttat ggcagaatgg ttgacttcaa   1740
gaatactgtt attatcatga catcgaatat cggaacccgc cagttgaaag agtttgggcg   1800
tggagtcggt tttgccactc aaagccgtct tgacgataaa gaattctctc gcagcgtgat   1860
tcagaaggct ctgaataaat cgtttgcacc cgaatttata aatcgtgttg acgaaatcat   1920
cacctttgac cagttgtcat tagaagctat aacgaagatt atcgatattg agttgaaagg   1980
actgtataac agaatcgaat ctatcggcta taaactggtc attgaagaca aggctaaaca   2040
gtttgtcgct tcaaaaggct atgatgtcca gtacggtgca cgtccgctga agcgtgccat   2100
ccagacctat ctggaagacg gcttatcgga acttatcatt tcggctgatc tgaatgaagg   2160
agatacgatc actgtctctt tgaatgaaga aaagggtgag ttggaaatga agaatgaagc   2220
caaaacggct gaataa                                                   2236
```

```
<210> 282
<211> 717
<212> DNA
<213> B.fragilis

<400> 282
tctaaatctt ccggattata ttggaatagg caaacataca agcattggat atggtacgat     60
aactcgaaac taatacaaaa aagaccaaaa atgattgaat ctatcacatc aataggaata    120
ttcattgacg gaggatattt cacaaaaata aatcaggctc ttgaggaaaa attgtcactg    180
aatatcgaca taacctttt ctttaaattt ataaaagaga aaatagccta tgaatataat    240
ttaaacactg aattctgtca aataacagaa agtcattatt ccgtggacg gtatcgtgtt    300
aacgatgcta ataacaaaca tttgttattc agtgaacgta gtttgaaga ttcactaatt    360
gaaaatgatg tcatttttca ttacaagcat ttacgtgaaa tacaaaagga aggtgaaatt    420
aacgttatag agaaaggcat tgatgtatgg ttcgctcttg aagcatacga gttatcactc    480
tttcgaaaat ttgattttgt tattctgatt acaggtgacg ccgatcacga aatgttaata    540
aaaaaattaa aagctctcaa aatccataca attcttttaa catgggattt atctccagaa    600
tctgcaactg cacggctgtt gcgggaagaa gcatgtaaac atatagaatt aagtgaaatc    660
gctatagaag ataaggatct aataaaaaag atatgcagaa gcaagcaaaa gagataa       717
```

```
<210> 283
<211> 771
<212> DNA
<213> B.fragilis

<400> 283
aaaattatgt ctgaaaatat aagagtaagc gaagtatccg acattctgcg gcagcagctt     60
```

```
gaagggatcg agaccaaagt gcagcttgac gaaataggta cggtgctaca ggtaagcgat      120
ggtgtagtgc gtatttatgg tctacgcaat gccgaggcca acgaactact tgaatttgac      180
aatggtatca aggccattgt gatgaacttg gaagaagata atgtaggtgc cgtgttgctg      240
ggaccgacgg ataaaatcaa ggagggattt acggtgaaac gtaccaagcg aattgcttct      300
atccgtgtgg gagaaagtat gttgggacgc gttatcgacc cgttgggtga accattggat      360
ggaaaagggc tgataggagg tgaactttat gaaatgccgc tggagcgtaa agctcccggg      420
gtcatctatc gtcagccggt gaatcaacct ttgcaaacgg gtctgaaggc tgttgatgca      480
atgatcccta tcggtcgtgg acagcgtgag ttgataatcg gtgaccgaca gacgggtaag      540
acatcgatag ccattgatac gatcatcaat cagcgaagta attatgaagc aggtgatcct      600
gtatattgga tttatgtaac tatcggacaa aaaggttcca cggtagcttc tatcgtaaac      660
accttacgcc aatatggggc gatggattat actattgtgg tggcggctac agctggagac      720
ccggctgcat tgcaatattt tgctccgttt ggcgggggct gccatcggtg a               771

<210> 284
<211> 798
<212> DNA
<213> B.fragilis

<400> 284
aaaggagctt tatctatgga gttgcgtact gtcaatgtca ctcgttatat tatgcctctg       60
cgtgaaggtg gttcactgcc tgcattggca gaagctgatg acagtttttaa gtatgttgtc      120
aagtttcggg gagcgggaca tggaaccaag gcattaattg cagaactgat tggcggtgag      180
gttgcacgag tattaggctt tcgtgtaccg gagttagtgt ttttgaattt agatgaagct      240
ttcggacgtt cggagggtga cgaagagata caggatttat tgcaaggaag ccgcggatta      300
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gatgaaaaac tggcatcaca ggtggtatgg ttagatgctt tattgactaa tgtagatcgt      420
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gcatctctat tttttcatca ttcatgggtc aattggcata acatgcact tagttctttt      540
acccaagtta aagaccatgc cttattgccg cttgccggta agttggacga agtggatgcc      600
gaatttcgga aattactgac ttcggaaaaa atacgtgaaa tagtggatct gattcctgat      660
agctggatag agtggcgtga taaagatgaa actcctcaag atattcgtga tatctattat      720
cgatttttga aagaaaggat tgaacattct gaaatatttg taaaagaagc acaacatgcc      780
agaaaagcat atttatga                                                     798

<210> 285
<211> 441
<212> DNA
<213> B.fragilis

<400> 285
tctgttttta ctatgaatat gagcatcaca aaacgcaatt ttctgggtta tctcagcatc       60
cttactcttg tagggggagg attgggagcc ttggtcttgc attatctgga acccggacat      120
tatttcggag gttatccgtt gataccggtg tactttata tattcggtgt attttatatt      180
tatatgtttg atgcctgcag gcgtcatgca ccggagaaga tggtgatgct cttttttagtg      240
gcaaaagtat tgaaaatgat tgtatcagtt ttcttactaa tcatttattg tgtggctgtg      300
cccgattccg ctattgaatt tctattgaca ttcctggcgt tctatctggg ctatcttata      360
tatgaaagct ggttttttctt cgtttttcgag tggaatcaga aacttacaaa gaaatcaaaa      420
aaatatgaaa cagttgcgta a                                                 441

<210> 286
<211> 1386
<212> DNA
<213> B.fragilis

<400> 286
aaatatgtaa cgcttcacta tatggcacaa caaaccgatc cccgcatact gggtacagaa       60
cctattggca aacttctgtt acaatattcc atcccggcca tcatcggaat gactattacg      120
tcactttata atatcatcga cagtattttt atcgggcacg gtgtcggtcc catggctatc      180
tccggactgg cgatcacctt cccgctaatg aatctggtcg tagcgttctg tgtactgatt      240
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tcggcaggtg gagctaccat ctcatccata cgcttgggac aaaaagacat caagggtgcg      300
accgatgttc tgggaaatac attgatgctt tgcctgacga atgcagtgct gttcggtgga      360
ttggcttatc tattcctgga cccgatattg ttttttcttcg gcgccagtac cggtacactt     420
ccctatgccc gtgattttat gcaagtgatt ctcttgggaa ctcccatcac ttataccatg      480
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ctggtgacag ttattgccaa tgtcatcatc gctcctgtct tcattttcca tttcggctgg      600
gggattcggg gagctgctat ggctacagtc ctgtcacagt ttatcggaat gatatgggta     660
gtaaaccact tccgtaacaa agagagtttt gtccatttca tgccgggttt ctggaaaatg      720
aagaaacgca tcatcggcag tatcttctcc ataggaatgt ctcctttgc catgaatgtt       780
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gctatcggtg cctatggtat cattaatcgc ctgctgatgc tgtatgtaat ggtggtaatg      900
gggttgacta tgggaatgca gcccatcgtc ggatacaatt atggtgcaca gaagattgac      960
cgtgtaaagc atacgctccg tctcggtatc attgtcggtg tattgataac gagtagcggt     1020
ttcattatct gtgaactttt tccgcacaca gtttcggcca tctttaccga tagcgatgaa     1080
ttgattgaca tggcatcgtc cgggctgcgc atttgcacgt tgatgttccc gtttgtaggt     1140
gcacaaatcg ttatatcaaa tttcttccag agtataggaa tggctaagat cagtattttt      1200
ctgtcacttt cgcgccagtt agtataccotg ctcccgggat tacttctgct tccacccctta   1260
tatggtgtaa aggggggtatg gatcagcatg cctgtctctg acggattggc ttttgtaaca     1320
gcggtagtga ttttgatggt gtatatcaag aaagtaaaag agaaacatc cggacagaag       1380
ctataa                                                                 1386


<210> 287
<211> 993
<212> DNA
<213> B.fragilis


<400> 287
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gtatacgact acaacctgca atacatagac ttgattcata agcaggcaac caagatgaac      180
ctgtatgtat tcgatgaaaa aggtgtattt gtgacagaat cggaagaaga atccggtgct      240
tgtgcaccgg attacctgat gactctaccc ggagccatgg caggcagaag atatattttt      300
gtggcttggt cggggttgta tgacaagtcg tatgacaaag ttaccctgac tcccgggggta     360
tctacgttgg aagatctgga agtcagtgtc aacaatctga aaacccggat tggaggaggg      420
gtggtcgaca gagaactcca tttactgtgg catggcaaac agacggaagt atctccacag       480
tataataatg atatcaccac tgtctctttg ctgaagaata cgaagaaatt ccgtatcatc       540
atgcagatgc tcgacgacag cagtattcac gtggatgatt atgattttcg aattatttcg       600
cccaatggga ggtacaacca tgaaaatggg cttttgggag acgaaacgga cgagaaagtg       660
gaatatactg cttatcatac cgaagacgat cctgagaccg gagctatagc caaactgaat      720
acgttgcgtc tgatgactga taccgaaaac agattggtta tcacgcataa gtcatcgggt       780
aatgtgattc ttgacatccc cttgaataaa tatcttaatg cgctgaggct tcagcaatat       840
gctgatatac ctttgcagga atatctggac cgtgccgata aacacggtat tattctattc        900
tttaaaggta tggatggcaa cggaaattat ataagtgtgg atgtacagat caacggttgg       960
ttgatccgga agcaagaggt cgatggagtt taa                                   993


<210> 288
<211> 2307
<212> DNA
<213> B.fragilis


<400> 288
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tctcgggtag ctttcgaact gagctatgat aactgttttc aggatgtgga caaccttttac     180
attgtaaaga cggaatggat taaggatgga gtgatcaaag gaaatgcagg atcatataca      240
ttaataccga tagcatcgac agttgctgag gagtttccga aggaggtgga agtgcggtt        300
tgctcaagta tatctttttga agctattttc aaaataggta atcggaagat gaataaatct      360
tttatttttat cagactccct ttatttccgt actatgggaa ttgaggtcat tagtggtaat     420
ccgaatgatt tgaccaatcc tgatgtgctc ttttttatcac agtcggttgc acgagaagca     480
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ttcggtgaag aaaatcctat tggaaagact ttgcatatga tggtttgggg cactcccgta    540
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gaagcagtcc tgtcttttgc cagtcatagt aaatatggtt ggggacgtcc tggctggacg    660
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attaatactg acattgataa agtaattgca aaacatattc cctcagacat gaatatgcac    780
ttacatatga ttgtggttcc tttgcggact attcacctgg aacattcaga tgtgaaaagg    840
acgattctca tattatcttt gttaggattc gccattcttt ttgcggccac catgaactat    900
gtgcttattt ttgtttcctc actttctcag cgtgccaaag gaattggaat tcataagtgt    960
aacggtgcat ccgataaggc tatattttct atgtttatat atgaaacggc tttgattatc    1020
ggtgtttcct tggtgcttat gatcatattt ctattccaat ttcaggaaaa gatcgaagaa    1080
ttggcagagg tatccttatc atctcttttt acctggcata atttatgggc tccattatcg    1140
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cccgttactc aggtcttcca tccctatatt aaagagaata ggggatggaa aaggatattg    1260
ttgtttattg aatttgcagg ggtggctttt atctttggat tgatgtgtgt ggcatatctt    1320
cagtgtcact acattataaa tagggatatg ggatatcagc cgaagggtgt tgcatcttgt    1380
aagcatgatt ttgctgaacc tgacaacgca cgtaataacc tgaaatcttt accttatgtg    1440
gaggggggtag cttctattcg tggaagtatg acctggtttg ggaatcggga ggtaactgat    1500
gaaggtggaa aagttctttt cactcctcgt tgtgcggcat tcgacaaaga ctttgttcca    1560
ttattgggac ttccatatcaa gaccgggcgt aattttacag gtgaaaggca gtttctggtt    1620
aatcagccat atgtagagaa gatgggctgg aagggtagtg gggttggcga gatagttcct    1680
aatcgaggta cggtggttgg cgtgcttgct ccttttttgtt gtggtgtgct tccggctgat    1740
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gaacctttta cagagaactt gcatagactg aataatgaaa tgaaaaagat atatccgcaa    1860
gaggatatag agtttaggtc tttagaacag gatttagaac gatactatcg ccccacaata    1920
attttttcgtg acgccacttt tttggctttt ataacgatac tgtttatcac tctgatggga    1980
ttgattggtt atataaatga tgaagtccgt cggcgtagca aagagatagc tattcgtaaa    2040
ataaatggtg ccgaagccag atctattctc ttttattat ctaaagatat cttctgggtt     2100
gcaattctct cggttgccat cggtacatac ggagcttact acatgagtct gttgtggata    2160
agtcaatttg aagatacaat ctgtgtttat gcaggttggt atgtagtgac agctatttgt    2220
ttattggtct ttatctttgt tttcattata gggagatcct ggcatatcgc taatgaaaat    2280
ccggtgaaca gcatcaagtc tgagtaa                                        2307
```

<210> 289
<211> 1215
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (295),(339),(357)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 289
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agaactgcga cttcccgaac gagaaagaac aatattaatt gtcgtatggc gactaaatta    60
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ttgttgtacc ctgtactccc ggtaatgatg gcttcacgtt taggcgtgcc tgtcagtcag    180
acgggagtca tatttatatt ttttacgctt gcaatgtttt ttatcggccc gttccatgcc    240
tatttggtcg atgtttacaa gcggaaatat atatgtatgc tttcgtttgg gggtntttggt   300
tgcagcaacc agccgggtta tacgttggtg cagaacgcna cacatctgtt gatgctntgc    360
attgtgcagg gattatcttt tggaatggct gccacggcag gcatcacatt ggccatcgat    420
atcaccaatt ccacttttcg cagcgcaggt aatgtggtct tttcctgggc tgcacgcttg    480
gggatgatta tcggagcggc tttgggagta tatttgtttc ggacacatgg ctttgagact    540
ttgctatatg ttgctgtggc gttgggagcg ttgggaatat tatttgtgtc aagggtatat    600
gttccctttc gtgcacctat cgggatgaaa gtttgttcca tggaccgatt cctgcttctc    660
cggggactta ttccggcatt caatttaata ttgattgctt ttataccggg attgatgctt    720
cctgtgcttg ccggtgcgcc gagtgatgtg ccggtaggag gcgagacagt accttttttt    780
gctttggtcg atgcggatt tctcttatca gtattaattg tgaaattgtt tttccgctat    840
gataataaaa tgtggttgca gatagttgtc gggctggtga cagtaatcgg atcgatggct    900
atgctgttct ctcctgaaac aagctggaat gctccggcag ctgtattgat gggtttagga    960
```

```
ctcggcttgg tcactccgga gtttcttatg atgtttgtca aattgtcgca acactgccag    1020
cgcggcacgg ctaataccac tcatctactt gcatgggaac ttggagtcgg attgggtatt    1080
gcatctgcgt gtcatttaca tcttacggct aatgaacagg ccgtttatcg ggtcggattg    1140
ttatcggcaa tcgtgtcttt ggcattcttc gttttactta cgtatcctta ttttaaaagg    1200
aagaaggtaa gataa                                                     1215
```

<210> 290
<211> 1401
<212> DNA
<213> B.fragilis

<400> 290
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aatgcgcgga cccttccagc cccgtggtgg aagaccgacc cgacaacttc gggacgtact     60
gaagagcaag tcgtgaatca tgtacgcatg gtgctgtatg aaaccaagaa taataccgtg    120
cgttactctt gggacctgaa tgtatctact gacggaatga atgaatttac cggaggagat    180
gtagtgagag gagaagatgt gccatcggct acgccgactg tgagtcgttt tgttacagta    240
ggtcgtgaag tggtgaaaca ggattatgag ttattgatat tgatcaatcc tcccggtgaa    300
ttgctggaga ttaccgaaca gggaaatccc agaagttatt tatcgcgtgc agccaatatg    360
acaaaagagt cgctgataca gccttatggt attgctgccg ataataactt ttatatgact    420
aatcatcagg accttatttt tgttcctgag gtggagttga gggataatca acggatggcc    480
gaagaaaatc cggtaagggt cgaggtggaa cgtgcggtag ctaaagtcgt tgtcagcgga    540
gtgcctgagg tagtaccgca cggtgatcgg attgacaatc tgaaatgggg actggatgtg    600
accaatatgt atacctactg gatgcgtaag atgactttta tagctaactc gggtggtgtt    660
ccgaatgaaa tggaacaact caatgccgga taccgcgagg aacgctatgc cgaagatcct    720
aactttacaa gattcagttc ctggaatgga ggaaaccctg tcggacagtt tgagtatttg    780
tcagggactc cggagttgag caagaatttt gatgactatg attatacgct ggaaaatacg    840
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acgccgaatg gcttcggatc ggttgcgact cgtaacggag ggggcatcag tttctactat    960
ttcaaaggca atgctatcag agtggaagcc atgcgggata tggtaaatga caggggggcag   1020
attcctcagg aattacgtga tgcaggtttg gaacaggcta tagagaacgt actggcctgg   1080
aacccgaatg catttaattc acctacggtt tcttttttcgg agggtggcat tcatttctac   1140
tatcaaggag tgtgctatta tacggttctg attcgtcatt tctccaataa catggtacct   1200
gtattgatgg gatacggacg ctatggcgtg gtacggaata atgtatatca gcttagtatc  ·1260
aataagatta tcggtccggg acagccggtg atcaatcctc ccggaacaga tccggatgac   1320
gaagacactt cctggatctc ggctgacgtc aacattatgc ggtggtatat ccgtaatcag   1380
aatgtagagg aactttttata a                                           1401
```

<210> 291
<211> 1395
<212> DNA
<213> B.fragilis

<400> 291
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aaaatgggaa ctatcatcat tgttgacgat aataaaggag tgctgacagc cgtacaatta    120
ctattgaaaa atcattttttc gaaagtcatt accttatcct ctcctgtcag tctgtccaca    180
gtgcttagag aagaaaaccc ggaagttgtc ttattggaca tgaatttcac ttccggaatc    240
aataatggta acgaaggtct gttttggtta catgaaatca aacggcaata cagagacctt    300
ccggtagtac tattcacagc ttatgctgat attgatcttg ccgtacgggg gataaaagaa    360
ggagcatctg attttgtagt gaaaccatgg gataatcaaa agctgttgga aactctttta    420
aatgccgctt cacaagcaaa agacggaaag aaaaagaatc gcaaaaaaga atcatctccg    480
gtttctgcca tgtattgggg tgaaagcagt gctatgcagc agctccgcac gttgattgag    540
aaagtagcaa cgaccaatgc gaatatactg ataacaggtg aaaacggaac gggaaaggaa    600
atgctcgcac gtgagattca tgctttatca ccacgctctg ccgagagcat gatatccgtt    660
gatatgggtg ctatcaccga atccttgttt gagagtgaac tgttcggaca tgtgaaaggt    720
tctttttactg acgcccatgc cgaccgtaca ggtaagtttg aagcagcaga ccgaagttcc    780
ctgtttcttg acgaaatagg aaaccttccc tttcatttgc aggctaagct actgacagcc    840
attcagcaga gaagcatagt tcgtgtaggt agtaaccaat ctatccccgt agacattcgc    900
ctaatctgcg caactaaccg aaacttgcag gagatggtag acaaaggctt attccgtgaa    960
```

```
gatttattat accgtatcaa caccattcat gtagaaattc ctccacttcg caaacgtaaa    1020
gaagatattg ttccgctagc tgagcgtttt atagcccgct tttgcaaaca gtatgacaaa    1080
gcctctatca gcctgagtcc ggccgcttgc gagaaactga ccgcacatgc ctggtatggc    1140
aatatccgcg aattggaaca ttccattgag aaagcagtca ttattagcga tggtgaaacc    1200
atccccgctg aaatgttcca attagtgcag aaaacggaga acccggaaac agagacctct    1260
actcttgaag atatggagaa agccatgatt cgcaaggctc tcgacaaatg tggaggcaac    1320
ctttcggctg tagccgctca attaggcatt acccgccaaa cattatataa taagatgaaa    1380
aagtttggtt tatga                                                     1395
```

```
<210> 292
<211> 1230
<212> DNA
<213> B.fragilis
```

```
<400> 292
aaatgttatt tttgcagctt aaataatatc attctattct atatggattc aaatcatctt     60
tctcctttac gcaaaggagt agtaggagta cagttccttt ttgtggcttt tggagctact    120
gtacttgtcc ccttattggt cgggctcgat ccttctacag ctttgtttac tgccggtatc    180
ggcacacttc ttttcatct ggtaacaaaa gggaaggtcc ctatttttt aggtagtagt       240
tttgcattta ttgctcctat tattaaagca accgaactgt atggacttgc tggcacactt    300
tcgggaatgg taggcgttgc aatggtctac tttgttatga gtgctttagt taaatggcag    360
ggtatcaggt tgatcgagcg cctgtttcca ccggtagtta ttggtccggt aattatattg    420
ataggcttt cacttgccgg gactggagtg aatatggcaa aggaaaactg gacattggcg      480
ttgctttcgt tgtttactgc cgtgattgta tctattcggg cgaagggact attgaagtta    540
atacctattt tttgtggaat tattgtggga tatattgctg cgttgatctt ttatgatgtt    600
gatatgtcgg gagtcagaaa cgctgcgtgg ttgggttttc cacagtttgt gtttccacag    660
ttttcgtggg aacctatttt gtttatgatg ccggtggcta ttgctccggt gatagaacac    720
attggggatg tgtatgtggt aaacactgtg acgggaaaag actatgtaaa agatcccggg    780
ttgcatcgca cactattagg tgatggcttg gcatgtcttt gtgccggttt attgggagga    840
cctcctgtaa ctacctattc ggaagttaca ggagccatgt cgcttactaa agtgacgaat    900
cctcaagtaa taagaatagc ggcgattacg gccattctgt tttccgtaat cggtaaagtc    960
agcgctttat tgaagtctat tccttcggct gtattaggag gaatcatgtt actcttattc   1020
ggtacgatcg cttgcgcggg aattgctaac cttgtcaata attgtattga cttgagccgg   1080
acacgtaata tcattattgt ctcactgact ctgactattg gcatcggtgg tgccgtattg   1140
gcatggggcg aattctcact gtcgggaatc ggtcttgccg cattggtagg agtaggcttg   1200
aatctggtac tgccaaaaga agagagatga                                     1230
```

```
<210> 293
<211> 933
<212> DNA
<213> B.fragilis
```

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<400> 293
acaccttacg ccaatatggg gcgatggatt atactattgt ggtggcggct acagctggag     60
acccggctgc attgcaatat tttgctccgt ttggcggggg ctgccatcgg tgagtatttt    120
cgtgataccg gccgacatgc actggttgtt tatgatgatt tgtcgaaaca agcagtatct    180
taccgtgaag tgtctttgat tctccgtcgc ccctcgggac gtgaagccta tccgggcgat    240
attttctatt tacactcccg tttgctggag cgtgcagcca agattattaa tcaggaagaa    300
gtggcccgtg agatgaacga tttgcccgaa agcctgaaag gtaaagtgaa aggtggaggt    360
tcgctgacag cattgcctat tattgaaact caggccggag acgtttctgc ctatattccg    420
actaatgtga tctctattac agacggtcag atattccttg tacggattt attcaatcaa     480
ggtaatcgtc cggctattaa tgtaggtata tcggtttccc gtgtgggagg taatgcgcag    540
attaaggcta tgaagaaagt ggccggtaca ttgaaaatcg atcaggcaca atatcgcgaa    600
ttggaagcat tctccaaatt tagtggagat atggatccgg ttaccgcact gaccattgac    660
aagggggcaga aaaacgcccg tttgctggtt cagccccaat actctccaat gccggtagag   720
aagcagattg ccattctcta ttgcggtatc cacggattat tgcgaaatgt tccgttggat    780
aaggtagaag attttgaagc agcgttcctc aatacactcg ctctcgatca tcaggcggat    840
gtgctggatg tattgaaaac cggagtgatc aatgacgagg taacgaaggc cattgaagaa    900
acggcggcaa tggttgccaa acagtatagt taa                                 933
```

<210> 294
<211> 879
<212> DNA
<213> B.fragilis

<400> 294
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aaaatcactt cagcaatgaa gatggtggct tctgccaagt tacacaaggc gcagggagcc   120
attgagaata tgttgcctta tcagaggaag ttgaataaga ttctgactaa ctttctgagt   180
gctgatcttc cggtagagtc tccgttctgt gtggaacgtc ccgttaagcg ggtcgctatt   240
gtggcttttt cttccaacag ttctttatgc ggtgctttca atgcgaatgt actgaaaatg   300
tttttgcaga cggtgggaga atatcgcgag ttgggacaag ataatatcct gatctatccg   360
gtgggcaaaa aaatagagga ggctgtcaag aagttaggat tctttcctca aggcagttat   420
cagaagttgg cagataaacc gtcgtatgat gaagccgctg cattggctaa attgttgatg   480
gaactttttc tggaaaaaaa tatcgaccgt gtggagttga tttatcacca tttcaagtca   540
atggggggtac aagaactgtt gcgtgaaaga tatttgccga ttgacttgtc tgccgttcaa   600
aatgacgaag agagaggcgg agtagtgaat gactatatca tagaaccttc tgcagctcaa   660
ttgatagcag acttgattcc gcaggtgttg agtcagaaga tatttacagc tgctctcgat   720
tctaatgcat ccgaacatgc tgcacgtact ttggctatgc agatagcgac ggacaatgcc   780
aacgaactga ttcaggagtt gacaaagcag tataataaaa cccgccagca ggccattaca   840
aatgaattgc tcgatattgt aggtggcagt atggcatag   879

<210> 295
<211> 858
<212> DNA
<213> B.fragilis

<400> 295
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aaaggaatta ccgcaatctt tctttgttgt ctgctagttg ccggatgtga cttgatagat   120
tatcatccat atgacgtcga cataaaagga gaaagagaca ttaatgcgaa aaatattcaa   180
aagatcgagg ccaaatgcct gggaaagtct actatacgct ttatcgccat gggtgactcg   240
caacgctggt atgacgaaac cgttgacttt gtaaacgctg tcaacaaaag agacgacatc   300
gactttgtag ttcatggagg cgacttcagt gacttcggac ttaccgatga atttctttgg   360
caaagggata taatgaataa actaaaggtt ccttatgtag gacttatcgg aaaccatgat   420
tgtttgggaa ccggagaaga tgcattccgg caaatattcg gcgatacaaa cttttcgttc   480
atagccggag gtgtgaaatt tgtatgcctc aataccaacg caatggaata tgattattcg   540
gaaccgatcc ctgattttga ctatattgaa agacaactca cagaacgtgc cgacgaattt   600
aataaaaccg tattctgtat gcatgcccgt cccctttgtg atcagttcaa taacaatgtg   660
gccaaagtgt ttcaaatgta tgttcgccaa tttcccggtt tgcaattttg cactgtagct   720
cacgaacatc ggatcagtgc gtcagatgtg tttgacgatg gcgtgatgta ttatggaagc   780
aattgtatga aaaatcgcag ttatttagta ttcacgataa aacctgatgg ttatgattat   840
gaagtggttg aatttttaa   858

<210> 296
<211> 981
<212> DNA
<213> B.fragilis

<400> 296
tcaataaccc aaacggcagt tatgaaaaat tatatcgtta acgaactcat tgcagcaatg   60
aaagaacgga ttccccgtgg aataaatctg gccaactacc tgacagatgc cctatgtatg   120
ggaaaagagg ctgtataccg aagattacga ggcgaagtgg ctttcacctt tgacgaaatt   180
gccatgattt catgcaaact gggaatatca attgatcaga ttattggaaa tcaccagtcg   240
aaccgtgtga ctttcgattt aaacctgctt cactcacccg atcctctgga aagttattat   300
gagattatag aacgctatct gcgcatattc aactacgtaa aagatgatat cagcacgaag   360
atatataccg cttcgaacgt aattcctttc accctctatt cttcgtacga atacttatca   420
aagtttcgcc tgtgcagatg gatttatcaa aatggaaaaa tacgtacccc aaacagctta   480

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tcgggaatgc acataccgga caaagcggtc catgcccata aactgttgag tgaggctgtc    540
aaagcgtgca gaaagacctg ttttatatgg gacagcaatg tcttctactc gtttgtaaaa    600
gagatgaagt attttgccgg cctcaatctg atttcggaaa cagacctgat acatttaaaa    660
aacgaactgg agctgttgct gcatgaactg gaacagatat ccgcaaaagg tgaattcagt    720
aacggaaaca aagtagccat ttacttatcc aatatcgatt ttgaagcaac ctacagctat    780
atagaaaaga aagatttcca aatcagtctc ctccgggtat attctattaa ctcaatggac    840
tctcaaagcc cacgaatttg cggcatacaa aaagactgga tacaatcatt gaaaagacac    900
tccacactga tttcagaaag cggagagtcc caaagaatta ctttcctgga acagcagaag    960
agtttcatcg acaccctgta a                                              981
```

```
<210> 297
<211> 987
<212> DNA
<213> B.fragilis
```

```
<400> 297
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gaagccgcaa aagaaaagat gccgaccgga accaacctgg caaacactct aatggacatt    120
ttatatatag gtaaggaggc catctatcgc cgactgcggg gagaagtacc gtttactttg    180
gcagaagctg ccgtcatctc gagaaaattg ggaatatcgc tcgacaaaat gatcggtgtg    240
agtttcagca acaatgcggt attcgacctg aacgtcgtac accataccaa tacattcgaa    300
acctatcacg atattctcac gaaatatgtc aatgcattcg ataacatccg ggaagatccc    360
actacagaaa tggcaacctc ttcaaacata ttgcctcaag cattatatct caaacatgat    420
gtactttcaa agtttcgtct gtttaaatgg atgtaccaga atgaaaatat caaatgcaag    480
cattttgatg aactggagat tccccacaaa atatataaca tccagaaaga ctttgtcaat    540
atgacacagc agatgaagac gactgattat atctgggaca ataccgtatt cgaacatgta    600
gtgagagaca tacagttctt ttcggaaatc cacctggttt cggaagaaga caaagagttg    660
ataaaagacg atttattgct tctgacggat gaattggaag agttggccgg aaaaggtaag    720
tatgaaaccg gtaacgatgt acgtatctat atctcaaata tcaagttcga tgccacctat    780
agctatgtgg caaccagcaa cagccatatc agtatgatac gcatatactc catcaatgcc    840
attacaacgc aggatgacgg catgttccgc agcctgaaag agtgggtaca atcactcaaa    900
aaattctcaa ctcaaatatc cgaaagcgga gagatgcaac gtatacgttt ctttaatgaa    960
cagcgtgaaa taataaatac cttataa                                        987
```

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<210> 298
<211> 1392
<212> DNA
<213> B.fragilis
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<400> 298
caattcttcc ttgtcccgtt ttttctgctt tctaataact ttctaatctt atctgagtat     60
cttataattg ctttcaaacg gtttgcttca tggggggagtt gtactttgc ttccaaaata    120
acaaggacta tgatcagaaa gttttttatt ctcttttttc ttggcttttt cggatttgcc    180
gaagcccaac agccgtccgt cggcttgact ctgaaggagg cagagcaacg tttcctgaaa    240
tgtaatttat ccctattggc cgagcgctac aatgtagaca tcgcacaagc caggttgctt    300
caggccggac tgttcgataa tccggtaatt tcattcgaac aaaatgtgta taaccgattg    360
aatggaaagt actttgactt cggcaaaaaa ggcgagtcgg tagtcgaaat agagcaggtg    420
atacgccttg ccggacaacg gaataagcag atacggctgg aaaagataaa caaggaaatt    480
gccggttatc agttcgaaga agtgatgagg actttacgcc aggaacttgg cgaggcattt    540
acagaagttt tctatctctc aaagtcattg tctgtttatg ataaagaaat caattcgctg    600
gagcatttgc tgacaggtat aaaagagcag catgcaaagg gaaatatctc tttaatggaa    660
atggcgagac tcgagtctat gctgctttct ctgaagaaag acaagaacga atgcgaaagc    720
aactatttgt cccggagagg agaactgaat ctgttactga atctgcctgc cgactttcgg    780
acagagcctg taatagatga aggagatctt cgacaattaa acatggaccg gttgtcttat    840
gccgatttac aagagagggt acacgggaga cctgaccaga agttggcacg cagctgtgtc    900
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aaaggtagtt atgatcgcca aggtaatttt attaataact actttgcaat cggattcagt   1020
atgtcggtgc ctatctttaa ccgtaaccag gggaatatta aaatggcccg tttcaatctt   1080
ctgaaggcgg atcgggagca agagtattcc cgaaataaag ccgaggccga actatacgca   1140
```

```
gcttatactg cttttagagaa agcatgtcag ttgtatcagt cgactgatat gggactggaa      1200
cagaattttg agaaactgat agccggagcc aacgagaact ttatcaaacg taacatcagt      1260
cttttagaat tcatcgactt ttatgatagc tacaaagaga cttgcatccg gctttacgaa      1320
atcaagaaaa acgtactgct cggtatagag aacctgaatg cggtggccgg acaacctatt      1380
tttaactact aa                                                          1392


<210> 299
<211> 678
<212> DNA
<213> B.fragilis


<400> 299
caaacacgta aaagaatgtt tatggatgca acaaagaaaa taacggcatt attcgattgt        60
gatggtgtaa ttgtcgatac agaagggcag tataccgttt tctggaatga aatgggccaa       120
aagtatgtaa atgatgcaaa ctttggttcc aaggttaagg gccagacact ggtacagatt       180
tatgataaat actttgcagg agaaccggaa aaacagcggg atataaccga ggcattgaac       240
cgctttgaaa taaaaatgaa ttatgactat gttcccggaa tagttgagtt tatagcagat       300
ctgcgtcggc atggtgtgaa aatagctttg gttaccagtt ccaatacggc aaaaatggag       360
aatgtttatc atgcccatcc cgagtttaaa tccctttttg atgaaatatt gactgcagag       420
cgttttaagc gttctaagcc tgatcctgaa tgtttcttgt tgggaatgac aattttcggt       480
tccgattcaa aagattcgta tgtgttcgaa gattcatttc atggtttgca ggccggtaga       540
tcatccggag ccattgttgt cggattggca actacgaatt cacgcgaagc cattgccgac       600
aaggcagact atgtaataga cgatttcaga gggatgactt acgaaaaact gctgactata       660
acttcacgtt atatctga                                                     678


<210> 300
<211> 687
<212> DNA
<213> B.fragilis


<400> 300
tatcatttca atcttaaaat tatgacctac ctcgctacca accccctatt ccatggaatc        60
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aaaggagaca ttcttgccag gcaaggtgat gtatgcaatc ggctgatgat attactgaaa       180
ggcagtgtcc ggggagaaat gatcgattac tcgggcagat tgattaaagt ggaagatatt       240
attgctcctc gtgcaattgc ccctcttttc ttatttggtg cagacaatcg ctatccggta       300
gaagttacag caaacgaagc taccgaagtt ttcgaaattc cgaaagaaag cgtactgaaa       360
ttatttcgac ggaatgagaa attcttagag aactacatga atctttctgc caattatgcc       420
cgaacacttg ctgacaaact gttttttatg tcctttaaga cgattcggca gaaacttgct       480
tcctatctgc tacggatgtt gaaacaacaa ggagacagtc cgatacaact tgaccgctcg       540
caacaggaac tggctgatta tttcggagta tctcgtccct ctctggcacg cgagctggct       600
catatgcagg atgacggcct gatcaaaacg gacaggaaat tagtgcatat cttgagaaaa       660
gaagatatga tgcaactgat acaataa                                           687


<210> 301
<211> 213
<212> DNA
<213> B.fragilis


<220>
<221> unsure
<222> (16),(34),(78)
<223> Identity of nucleotide sequences at the above locations are unknown.


<400> 301
tccctgcaca atgcanagca tcaacagatg tgtngcgttc tgcaccaacg tataacccgg        60
ctggttgctg caaccaanac ccccaaacga aagcatacat atatatttcc gcttgtaaac       120
atcgaccaaa taggcatgga acgggccgat aaaaaacatt gcaagcgtaa aaaatataaa       180
tatgactccc gtctgactga caggcacgcc taa                                    213
```

```
<210> 302
<211> 396
<212> DNA
<213> B.fragilis

<400> 302
aagaagcaca acatgccaga aaagcatatt tatgaatacg ccgttgttcg gatagttccg        60
aaagtggagc gtgaggaatt tatcaacgtt ggggttatct tgttttctaa acaggctgcc       120
tttatccgga tgcgttatga aattaataag aagaggttgg aggccttatc accggaacct       180
gatatcgatt ctttccggaa atatttggag gctttcagta aagtgtgtgc aggctgtccg       240
acgggaggag gcattgctaa actggaagtt ccggaacgtt ttcgttggtt gacagcccat       300
cgtagttcct gcattcagac ctcaagacct catgttggct attctgacaa tttagaggaa       360
acattggagc ggttgttcga ggaattggtt ctttga                                 396


<210> 303
<211> 207
<212> DNA
<213> B.fragilis

<400> 303
tttcgtggca aatatacagt ttttgtacga gaaaacggac acttcagcac agaaagagag        60
tatgccgata ctttcttttc gattagaatt ttgcataaaa atgtgagatt cattcgtgaa       120
atagagaaaa aagataaaaa tagatcattc ttattaggta atatgagcta ttttgttacc       180
tttgcgcccc cttattccat agcgtag                                           207


<210> 304
<211> 279
<212> DNA
<213> B.fragilis

<400> 304
accattttaa aactgaaaat tatgttacta tcagtattat tgcaagctgc tgctgcagga        60
gtaggattaa gtaaattggg agcagctctc ggagctggtt tagctgttat cggagcaggt       120
atcggtattg gtaagatcgg tggctcggcc atggaaggta ttgcgcgtca accggaggca       180
tcgggagata tccgtatgaa tatgattatt gccgctgcct tggttgaagg tgtagcgttg       240
ttggcattag ttgtttgtct attggtactt ttcttataa                              279


<210> 305
<211> 1140
<212> DNA
<213> B.fragilis

<400> 305
agctacataa agatgaatat ggaaataaat ccctcggaat ataaaattct cattgtagac        60
gatgttatgt ccaatgtcct tttattgaag gtattgctga ccaatgagaa gtttaacata       120
gtgacagcta gcaatgggaa tcaggcattg gaccaagtaa agaaagagaa tcccgacctg       180
atattgctag atgtgatgat gccggatatg agtggttttg aagtttctca aaagttgaag       240
gcggatcccg aagcggccca tattccgatc atctttttga ccgcattgaa tagtactgcc       300
gatatagtca aaggatttca ggtaggcggc aacgatttta tctctaaacc ttttaataaa       360
gaagaactga ttattcgggt cagtcatcag atttctttag tagcggccaa acgtattatt       420
gaagccaaaa cggaggaact taaaaagacg attatcgggc gtgataagct ttattctgtg       480
attgcccatg acctccgttc gcctatggga tctattaaga tggtgcttaa tatgctgatt       540
cttagtttgc ccaaagaaaa aatcggcgaa gatatgtatg aactgctgac tatggccaat       600
cagactaccg aagatgtgtt ttcgttgttg dataacttac tgaaatggac aaaaagccag       660
ataggtaagc ttaaagtcgt atatcaggat atcgacatgg tggaagttgt agagggagta       720
ggagaaatct tcgcaatggt tgccggcctg aagaatattc gtttgcgaat tgaatcgccg       780
gaatgtcagg cggtacatgc cgatatcgat atgataaaga cggtgatacg caatttaata       840
agcaatgcca ttaaattcag taatgaaggt tccgaagttc ttataaaagt tgaagagtcg       900
```

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gatggaatgt cggtagttag tgttaaagat agcggatgcg gtattgacga agaaagccag    960
aaaaaactgt tgcataccga tacacatttc agtacattcg gtactaataa tgaagaaggt   1020
tcgggactcg ggttactttt gtgccaggat tttgttgtga aaaatggagg aaagttgtgg   1080
tttacttctg ttaaagatga aggttcaact ttctatttct cgattccact gaaaaaataa   1140
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<210> 306
<211> 1599
<212> DNA
<213> B.fragilis

<400> 306
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catgccatga acaagggaat tttcgaaaaa gaacatccca tcgcattatc actactctcc    120
gcaatttcag gagaaagtat tttcttcctc gggcctccgg gagttgccaa gagccttatt    180
gcaaggcgct tgaaactggc tttcgaccaa agtactgctt ttgaatatct gatgtctcgt    240
tttagcaccc ctgatgaaat attcggtccg gtatctatct ctaaattgaa agatgaagac    300
aaatacgaac gcattatcga aggttatctc ccctcggcaa caatcgtttt tttagatgaa    360
atatggaaag caggaccaag catacaaaac tcactgctaa cagttatcaa cgaaaaggta    420
taccgcaatg gacaatatac catacagtta ccattaaaag gattaattgc agcttccaat    480
gaattgccgg ctcagggaga agggttagaa gccctgtggg atcgtttctt aatacgctat    540
tttataggga atatcgaaca ggaattcgct ttcgatcaaa tgatagcctc tgtcaatgac    600
atggaagcag aaattcccac cggactttct attacagaag aacaatatac agattggaga    660
actcaaatca gccaaatcaa gatacattat actgtttttg aattaattca ttccatcaag    720
cggcaaattg aaaaatataa catacagaaa gaagaggttc cacactcaac gctctatatt    780
tccgaccgtc gatggaagaa aatcgtatcg ctgctcagaa cttctgcttt tctgaatgaa    840
acagatacca tccgcttttc agattgtact ttattacttc attgcttatg gaatgaaata    900
gaacaaatac caattatcga acaaatggtg tcatcggcac ttgacgaatg tatcagccat    960
tatctttgtg gcgaacggac tttagaacaa aagctgagca gtattcggga agacatgaag   1020
tcagaacaca gtttgcgtga aacaaaagat ccggccctgc aaattgtaga cactttctat   1080
catcaaattg aaagatatcc tgtagcaggc aatctgttga ttttttgcttc cgactaccaa   1140
agtttacaaa aagatactca aaaattattt tacattcaaa gagataaata tcgtcctgtt   1200
aactggatat taaaagtata tgaccatgtc cgcaaccgga acatatccca atcagccata   1260
gtttcactca agaaaggcac acgttctgta ttcatcaaca atcaagagta tccactagct   1320
tgcaacgcag gatacgacat agcttaccct caagaagcct ctttaccctt tgaatttcgt   1380
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attgaactga cctattgtaa agaacatcta ttcatggatg acaaacaacg taatatggtc   1500
aaacaaatat taaacagaca aaaagaaatg ttggaaattt accaaaatga aatcagagaa   1560
atagcttata cgcatggatt ggaaaataag gaatattag                          1599
```

<210> 307
<211> 2991
<212> DNA
<213> B.fragilis

<400> 307
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agcaaacaaa aaatacaaca aacaggtaaa aggatacatg cagctcctct cccgaatggg     60
atacaaaaac atcacaggtt atctgtggta tgtagaagaa gaaataatcg aaaaagtatg    120
aaaacatttc tccaattggt cgcgcaggac ctttactgta aaataggaaa tgatctgtca    180
cgcacagcta tcatattccc taacaaacgt gccagtctgt tctttaatga acatttggca    240
aatcagtccg atcaacctct ttggtcaccg gcatatttaa gtatcagcga attatttcag    300
catttatcgg tgttaaaact aggagatccg attcggttag tatgcgagct ttataaaata    360
ttccgtgaag aaacaaatag tgacgaatca ctggacgact tctacttctg gggtgagtta    420
ttaatcagtg attttgatga tgtagacaaa aatctggttc atgcagataa gttatttact    480
aatctgcagg acttaaagaa tgtcatggat gattatgaat ttctcgacca agagcaagaa    540
caggctatcc agcagttttt ccaaaatttt tctatcgaaa agagaacact gttaaaagaa    600
aagtttattt ctctttggga taaattgggt gatatttatc gccgatatca taaaaagctg    660
gaagaattag gatttgccta cgaaggtatg ctctaccgaa acgttattga acaacttgaa    720
ccggattcat tgaaatatga ctgctatgta tttgtcggct tcaacgtact gaacaaggtg    780
gaaactcact tcttccaaca attgcagaat gcgggtaagg ctctttttcta ttgggattat    840
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```
gacgtgtttt acactcagcc tccttcccgg caaaaacaac gccatgaggc cggagaattt    900
atcaaccgca atctcaaact cttccccaat gagcttcctg ccgaattgtt caatgaattg    960
ataaaaccca aaaaagttcg ttttatctct tccccaaccg agaacgcaca agcccgttat   1020
ctgcctcaat gggtacatga gaacctgagt aacgaagaaa aagaaaatgc cgttgtgctg   1080
tgcaatgaag ctttacttct ccctgttttg cactctatac cggaggtagt aaggaatgtc   1140
aatatcacca tgggatttcc gttagcacag actccggtat atagtttat caacgccata   1200
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cgggaactta caaagaccaa ccgttttat cctttttccat ccgaattaaa gaaagacaaa   1380
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ggagaatggt cacgtttcat gctacagttt ctgattgaat ggccacatga aatcagccgt   1980
gaatatcttg aagccggaca atcgccacaa aacagcaagg aaatccgcat tacaaaaacc   2040
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cgtctcctga aattgcttga agagatatac gatgacaaag aggaattcac tcaaactgag   2940
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```

<210> 308
<211> 183
<212> DNA
<213> B.fragilis

<400> 308
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ataatgaaaa caaagataaa gaccaataaa caaatagctg tcactacata ccaacctgca    180
taa                                                                    183
```

<210> 309
<211> 369
<212> DNA
<213> B.fragilis

<400> 309
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aaaagtaaaa atatgaaagt cattgattta acaaaagaaa gcttcgtaga gaaagtggcc     60
gaattccaag aatacccgaa taaatgggat tttaaaggtg ataaaccttg cctggtagat    120
tttcatgctc cctggtgtgt atattgcaaa gccctgtcac ctatactcga ccaactggct    180
gtagaatatg atgggaaaat agatatttat aaagtggatg tagatcagga accggaactg    240
gaggctgctt ttgccattcg tacaatccct aacctgttgc tttgtccgat gggaggaaaa    300
```

```
ccaagtatga aattaggaac tatgaataaa acccagttaa aagcattgat agaagaagtt    360
ttgttataa                                                            369


<210> 310
<211> 1347
<212> DNA
<213> B.fragilis

<400> 310
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ttatcagctt gtgacagtta tcttgatatc agacccgtgg ggagcgtgat tcctcaaacc    120
gctgaggagt atcgtgcttt gctggcacgt gcttatctga atgtgcccaa tgacagaggg    180
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cgttggtttg atcttcgtcg tactacacgt cctcggatgg tgaaagtact tcaaggtaaa    1260
acttatatat tggaacagga cgatcctcgt tatacaattc ctattccgag agatgctatt    1320
gctgccaatc cgggattagc taactaa                                        1347


<210> 311
<211> 1683
<212> DNA
<213> B.fragilis

<400> 311
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atcataaaca actgggatgc aaacgccctg acagactaca aaggaatcac ccttcaatat    120
aaggatgtag cccgcaaaat agccaaattt cacattatat tagaaatggc cggtattcaa    180
ccgggtgata agatcgctgt ctgtggccgc aatagtgccc attgggctgt aacctttttg    240
gccaccgtga cttatggtgc tgtaattgtt cccattttac atgaatttaa ggctgacaat    300
atccataata tcgtcaatca ctctgaggca aaactcctct ttgtaggtga tcaggtatgg    360
gaaaacctta atgaagatcg gatgcctta cttgaaggta tatcttcttt gacagacttt    420
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aaacctggtg atcacatcgt ttcgatgctt cccatggggc acgtattcgg catggtctac    720
gattttcttt acggattttc tgcgggtgca cacctctact tcttgacacg tatgccgtct    780
cccaaaatca ttgcacaatc atttgccgaa atcaaaccga gagtaattgc ttgtgtaccg    840
ttgattgtag aaaagattat taaaaaagat attctcccca aactggataa taaaataggt    900
aagttgttgc tgagagtacc cattgttaac gataaaaatta aagcagctgc ccggcaggca    960
gcaatggaaa ttttggtgg aaattttgat gaaattatta tcggaggagc tccgttcaat    1020
gcagaagtgg aagcttttct taaacaaata ggatttccat acaccattgc ctatggtatg    1080
acagaatgtg gtcccatcat ttgttccagc cgctgggaaa ctctcaaaca ggcttcatgc    1140
ggtaaagcta ccagccgaat ggaagtgaaa atagattctc ctgatccgga aaatattgca    1200
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ggagaaatta tttgtaaagg tacaaactta atgttgggat actacaaaaa tacggaggcc    1260
acttcacaaa tcatcgatgt aaacggatgg ctccacactg gagatttggc taccatggat    1320
tcggaaggat atgtaacagt acgaggtcgg agcaagaata tgttacttac ttcaagcggg    1380
cagaatattt atccggaaga aatagaaagc aagtttaata acatgcctta tgtgtccgaa    1440
tcgttggttc tactccagaa agataaactt gtagcactaa tctacccgga ttttgacgat    1500
gctttcgcac acggactgtt gcaaagcgat attgagaaga taatggaaac caaccgaata    1560
gaactcaatc aacaacttcc ggcctactgt cagattacta aaatcaaaat ccacttcgag    1620
gagtttgaga aaacagcgaa gaagagcatt aaacgattca tgtatcagga agcaaaagga    1680
taa                                                                 1683
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<210> 312
<211> 252
<212> DNA
<213> B.fragilis

<400> 312
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ggaatcatga aagaactgca tttgaatatt gtatcgccgg aaaaagaggt ctttaatggt      60
gaagtgaaga gtgttaccct tccgggcacc agtggagtct tttctattct gccgcagcat     120
gcaccgattg tttcttccct gcaagaaggg acagtcagtt acacgacaac ggatggcgaa     180
gagcatacgc tggatattca cagcggtttt gtggagctaa gcaatggtga agcttccgtt     240
tgcgtatcct ga                                                        252
```

<210> 313
<211> 567
<212> DNA
<213> B.fragilis

<400> 313
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aaacggaaga atactatgca taagtttata gacaatattg tggcattttc gttgaaaaat      60
aagttcttca tcttttttttg tacgacgatt gccgtcattg ccggtgtggt ttcgttcaag     120
catacaccga tagatgcatt tcccgatgtg acgaatacga aagtgaccat cattacccaa     180
tgggcgggac gcagtgcgga agaggtggag aagttcatta cgattccggt ggagatagcc     240
atgaactcgg tacagaagaa gacggacatc cgttcgacaa ccctattcgg actgtcggtc     300
atcaatgtgt tgtttgaaga tcatgtggat gattttgttg cccgtcagca ggtatacaat     360
ttattgaatg acgcagatct tccggatggg gtgactccgg aagtacaacc tctttacgga     420
cctacgggtg agatttaccg ttatactttg cgaagtgaca aacggagtgt acgcgaactg     480
aaaacaattc aggattgggt gatcgaccgt aacttgcgtg ccgtatcgga agtgacggat     540
attgtcagtt cgacggggga agtattc                                       567
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<210> 314
<211> 231
<212> DNA
<213> B.fragilis

<400> 314
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agctttagga agtgtaaatc agagatgaaa gttctcaatg cgaacattga ggaaatacat      60
gtgagagtta aaccaataaa aacctcttat tgtttgatgt tgcaaagtaa ggcattaatt     120
ccggataata caccatatcc gcttcttttt atccttttaa atattcttta ttgtgtaatt     180
agaccaaaaa ttaacatttc tctttggcta tatgtgtctt atttgttata a             231
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<210> 315
<211> 747
<212> DNA
<213> B.fragilis

<400> 315
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atgataagga ataaagttat ggaacagagt tttatcgaat attcattagg aaaagatgct      60
tcttcggctg tcctttgggt ttatccggtt cgcaagccaa gaggtaaagc cattattatg     120
tgtcccggtg cggggttcaa tcagatagct tcagatcatg aaggacgtga ttttgctgcg     180
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tggtttaata atcagggcat cacatacgcc gtactgaatt atcgcatgcc taacggtgat   240
gttgaagtga ttcgtgagga tattcgtgaa gcgattcgcc tgatccgccg tcagtcggca   300
gagtgggggaa tccatcaact gggtgttatg ggagcttcta tcggaggcta tatcgctgct   360
actgccgcaa ctctttatac cggaacagac cggcccgact ttcaagtatt gctttatccc   420
gttatcagca tgaccgacag gctgactcat tggccttcac gcgaacgtat gttgggagaa   480
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cctcctacat tcatcgtttt ggccgaggat gatcaggccg tatctcctct caacagtatt   600
gtctattata cagcattatt gaaacatgga gtctctgccg gactgcatat ttatccggaa   660
ggcggacata gcttcggatt tcgtgacagt ttcatatata aggagttatg gactgatgaa   720
ctacaaaaat ggttgctgac cttttaa   747

<210> 316
<211> 204
<212> DNA
<213> B.fragilis

<400> 316
agggagtctg ataaaataaa agatttattc atcttccgat tacctatttt gaaaatagct   60
tcaaaagata tacttgagca aaccgcactt tccacctcct tcggaaactc ctcagcaact   120
gtcgatgcta tcggtattaa tgtatatgat cctgcatttc ctttgatcac tccatcctta   180
atccattccg tctttacaat gtaa   204

<210> 317
<211> 765
<212> DNA
<213> B.fragilis

<400> 317
gtattgagag aagctattcc tgcagcgcta tctattccgg gacgtgaggg gtatccggta   60
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gataaagaag ggaaaaaagt aactttgaaa gaactgtatc gctggcagga tccttttgga   180
ttaggtttta cggttaattc ggatgtaact ccggcagaag agcgtagctt ttattcgtat   240
attggttcac aagatactcc ttatacgggt ggcctgatca atacattcag ttataaaaat   300
tgggaattaa cagccaattt atcatttaat ctgggaggat atgtgcgtac aacgccttcc   360
tataatttca ttaattttga tagagggcag aacgtaaata gtgatatttt agatcgttgg   420
actccggaga ataccgatgg gcgtctgccg gcattaatca ccagcgagaa acgggctgac   480
gagtattatt ggtatgatca gaagagcgaa atttacaaga atttagatat ttgggtaaag   540
aaattaaatt atttccggtt gcaaaatttg cgtttaggtt accgtctacc tgagaaaatg   600
actaaatctt taggaatggg atcggcttct gtggctattg aaggacgcaa tttacttgtt   660
tttggttcaa gttataagaa ttttcttgat ccggagtcga tgtataatcc gtatgcaccg   720
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<210> 318
<211> 1050
<212> DNA
<213> B.fragilis

<400> 318
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gtttcctgcc tcaaatgtta ccggcatttg ccatggtgca gatgctggat acgtcacctt   180
tatacttgtt ccgacaaaca gttgatatgg aatcatctta cttttcgaaa ccgtatcggt   240
ctgtcggccg gtttcgataa aggagccgaa attttttgatg aattggccga ttgtggtttc   300
ggatttatcg aagtaggtac tgtaactccc gattctcagg atggaaatcc ccgtccgcgt   360
attttttcgct tgcctcagtg tgaatcttta atttcccgta cgggcttcaa taatcccgga   420
ttggatgtta ttaaacgccg tcttgaacag aaaagcggtt cgtatgtttt aggtgtaaat   480
ataaataaga atccctcttc ggaaggagag caggcggtgg ctgacttttt gcgtctgtat   540
aaggagttac atcctcatgt cggttatttc acacttaatt ggggatctgt ggatgttgct   600
ctgatgaaac aggtgctaca ggggttggca gcttttcgtg tggagcaaaa catacatgtt   660

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tacttaaaag gttattcacc tgcacaatta cagaagatcg gctccggtgg aatcagtgga    840
cgcgggatag gggagaggtc attaaaagcc gtcagctatt tgcgtgccca tgccggaaaa    900
agccttctga tagtaggggc aggcggaatc attactcccg ctgatgcccg taggatgttg    960
gatgcggggg ccaatctgat acaaatctat tcttcgttta tttatgaagg gccgggtata   1020
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```

<210> 319
<211> 3174
<212> DNA
<213> B.fragilis

<400> 319

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acctttacta ataaagctac tgctgaaatg aaggagcgta ttcttagtca attatatgga    180
atacagatag gcgatccgga ttcggatgcc tatctaaaac gcataattgc cgagacaggg    240
cattcagaag acgagatacg aacaacggca ggcatagctt tgggttatat gcttcatgac    300
tacagtcggt tccgcgtcga aaccattgat tcttttttttc aatcggtcat gcgtaatctg    360
gctcgtgaac ttgaattgag tcccaatctg aatatcgaac tgaacaacgt agaagtattg    420
agcgatgctg tggacagtat gattgaaaag ttgggaccca attcacctgt actggtatgg    480
ctgctcgatt atatagatga acgtatcgct gacgataaac gctggaatgt ttcggatgag    540
atcaaaagtt tcggacggaa tatttttgat gaaggataca tcgagaaagg tgatggtctc    600
cgccgacgcc tccgtgaccc gaatgtaatc cataattatc gtaagacatt aaaagagatg    660
gaaacagccg ctcttgaaca gatgaaagag ttcgctcaac agtttgaaaa tgtactttcc    720
agtcaatcac tgaaaccaac tgatttaaag aacggagcca aaggaatagg aagctatttc    780
aataaactaa aaaacggtat actcggagac gagatagtca atgctactgt aatcaaatgc    840
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aatcgaatag tgaacagctg ccgactgtcg acacagcacc tgagcaaagt ccggcttta    1020
accaatattg atgaagaagt acgtcaactg aatcgtgaaa acaatcgttt cctcctttcg   1080
gataccaacg ctttgctcca ccaattagtg aaagacggtg attcctcttt tgttttcgaa   1140
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aacggattga ataagcaact tggatatttt tctatccgta cagaaacgtt aaaaaccaac   1380
cgccgaagtg aaaccaatat catacgattc aacaatagta tattctccgc ggctgtggac   1440
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ttgcgctatc tttccgatcc ggagaatcgg atcgtgaaag cacagttggc cactaattac   1860
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ccggtcaata tggaatctat gcatccggat atagaattcc gacagtccaa ccgatctgct   2700
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gattttatca aggggctttc tgaagaagaa tccgatgacc gcttcataaa tcacggacaa    2760
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accgtaaagg ccttctccct gcctgaagta caagagtggt actccggtga atggagattg    2940
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cgtgtaatga tgaaaaacga gcaagtagtt gtggtagact tcaaatttgg taaagcaaac    3060
aaaaaataca acaaacaggt aaaaggatac atgcagctcc tctcccgaat gggatacaaa    3120
aacatcacag gttatctgtg gtatgtagaa gaagaaataa tcgaaaaagt atga          3174
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<210> 320
<211> 1095
<212> DNA
<213> B.fragilis

<400> 320
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aaaatagttt ccgtcgatac ggtgcatctg catgatgtgg cagatgaatt gactttgaac    180
ggacgtgtta cttttaatca ggaacaggtg gcacacgtct atccgatgtt tggcggaaca    240
gtgacggagc ttcgcgctga agttggggat tatgtgagaa aaggagacat acttgccata    300
ttgcgtagcg gtgaagtggc cgattacgaa agacagatga agaggcgga gcagcaggtg    360
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gataaagatg tattgcaggc acgtcaggaa ttgatcaatg ctgaagcgga agagaatcgc    480
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cccgttagcg gtttttattgt ggaaaagagt gtgagcagaa atatgcagct tcgtcccgat    600
cagggtgagg agatatttac tgtctccggt ctggagcatg tatgggtgat ggcagatgtt    660
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tatccgggta aggtgttctc cggaaatata gataaagtat accacatgtt gaatactgaa    780
agtaagacaa tgaacgtacg ggtaaagctg tgtaacgaag actatctgct gaagccgggt    840
atgttcacca cggtcaatgt tgagtgcaaa tcttccggga aacagatgcc tcggatcaat    900
gcacatgcct tgatatttga aggaggtaag aattacgtcg taaccgtcac ccccgacaac    960
cgcctgaaag tgaaagaagt cgatgtatac aaacggcaga atcaggaatg ctatgtccgt   1020
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<210> 321
<211> 627
<212> DNA
<213> B.fragilis

<400> 321
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cctcttcatc agaaaacgta taagaaaat gcctatgtct ctttcttctc tacagcttcc    180
tattcgttga tgaaccgtta tacattcgga ggaagtatcc gttttgatgg ttctgactta    240
tttggcgtag acaagaaata ccgttatttg cctctgtact ctgtaagtgg attatggaga    300
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gtttcgtatg gtattcaggg aaatattgat aaaaatacat ctcccttct gttgggtaaa    420
tatattgtag ataatatttt accgggtggt tcggaacata tgattgatat aaattctgct    480
ccaaacaaga aacttcgttg ggagaaaact caatcagtaa atgttggact tgatttttcg    540
gtactcaatc aggcgcttaa tctgagtgta gattactatt atcgtaaagg tacagacctt    600
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<210> 322
<211> 2574
<212> DNA
<213> B.fragilis

<400> 322

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cttttttctac agatgcggca gcatctaact tcaaataagg aaagcctttt tggaagcaag  180
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gacctctatg ataagagtcc gaccatagaa tcggagaatt ccgcaatct gctactgtct  780
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<210> 323
<211> 1479
<212> DNA
<213> B.fragilis

<400> 323

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ttccttcttg taggtatgct tttcggaagc gacggattgg gattacaatt tcataatgcc  180
aagatagccc aatttatagg tatggttgcc cttagcgtca ttctgttctc cggaggtatg  240
gatactaaat tcaaagaaat tcgtcctatt ctttctccgg gaatcgtact ttcaacagtg  300
ggagtatttc tcacggcact ttttaccgga ttattcattt ggtatctttc gggaatgagt  360
tggaccaata tccactttcc attgatcact tccctattac ttgcatctac catgtcgtca  420
acggattctg cttcagtatt cgccatcctc cgttcgcaaa agatgaatct gaaacataac  480
ctacgtccta tgcttgaact ggagagcgga agcaacgatc caatggccta tatgcttacc  540
```

```
atagtcctga tacaattcat tcaatcagat ggcatgggta caggcaacat aatcggttca    600
ttcatcatcc aattcttggt aggtgctgct gccggatata tcttgggaaa actggcgata    660
ttgatactca acaaaataaa tatcgataac caatcacttt atcccattct gttattgtct    720
tttgtattct tcacttttgc catcaccgat ctgcttcgcg gtaatgggta tttggctgta    780
tacattgccg gcatgatggt aggtaaccat aaaataactt tccgaaagga aattgcaaca    840
ttcatggatg gtctgacctg gctgttccaa atcattatgt tccttatgtt aggactgctt    900
gtcaatcctc acgaaatgat tgaagttgcc gttgtagcat tgcttatcgg agtattcatg    960
atcgttatcg gacgaccatt aagcgtattc ctttgtcttt taccatttag gaagattact   1020
ttaaaatccc gtctgtttgt ctcgtgggta gggctacgag gagctgtacc catcattttc   1080
gcaacttatc cggtagtggc aaacgtggaa ggatcgaata tgattttcaa tatcgtgttt   1140
tttattacga ttgtttcatt gattgtacaa ggaacaagtg tttcgtttgt ggcacgcttg   1200
ttacacttgt ccactccact cgaaaagacc ggaaatgact tcggtgtaga acttccggaa   1260
gagatagata ctgatctttc ggatatgacc attactatgg aaatgctgaa tgaggcagac   1320
accctgaaag atatgaattt gccaaaaggt actttagtaa tgatcgtcaa acgtggtgat   1380
gaatttctta tccccaacgg cacactaaaa ttacatgtag gagacaaact actgctgatc   1440
tcagagaaaa ataagcagga aacggttaag aatgaatag                          1479
```

```
<210> 324
<211> 312
<212> DNA
<213> B.fragilis
```

```
<400> 324
ttactgatgc tgttcacgca acaggtcgtt cacagtcttt accggattga aagtggaaag     60
tggaacctcc acaaataccg tactccaatc gctcatagca ccattccaca aaccgggaag    120
ttcaagagct ttcagatcct taccactctt cgacttataa gagatgaagc cggtagcttt    180
atccacatat ttcgccaaat caaatttatg acccttataa tcacgtacgg cgcaaaccag    240
atcgaccggg ttgaagtgcg tacccttttc aaacatttcc tttgcttccg gattattcat    300
atcgatttgt ga                                                        312
```

```
<210> 325
<211> 1248
<212> DNA
<213> B.fragilis
```

```
<220>
<221> unsure
<222> (473)
<223> Identity of nucleotide sequences at the above locations are unknown.
```

```
<400> 325
cattcctggc gttctatctg ggctatctta tatatgaaag ctggtttttc ttcgttttcg     60
agtggaatca gaaacttaca aagaaatcaa aaaaatatga aacagttgcg taacatagtt    120
gccggaatgc ttgtcttgat aggaggaatg ttgcctgcta caacctttgc acaggagcct    180
gtaccgggtg ataccaccgg tactttgcag catgagatta ttgtaggtaa agacacaatc    240
aatcaagaag ctaatcaggt agatgtaaaa ggcattgtgt tcggccctat tggagattct    300
tacgagtggc atattacgaa tataggaaaa acttcgattt gcattccgtt gcgattaatc    360
gtgtatagcg aactttctgg ttggcatgct tttctgtctt cgcgcctaga agagaatggc    420
ggcaaatacg agggatttta tatagctcct gccgggagca agtatgaggg ganagtagta    480
gaacgtaatg cgacgggaga ggaagtacgt ccgtgggata tttccattac aaaggtaact    540
ttgtctctct ttatcaatag cgctattttg ctggcgatca ttctgagtgt agcgcattgg    600
tatcgcaaac gtgaacaggg tgcatatgct ccgggaggat ttatcggatt tatggagatg    660
tttattatga tggttcatga tgatgtgatt aagagttgtg tgggacccaa ctataaaaag    720
tttgctccct atctgctcac agcctttttc ttcattttca ttaacaatat tatgggactg    780
atccccatct ttcccggagg agcgaatgta accggaaata ttgccataac attggtatta    840
gctttattca cattcgttat tgttaatata ttcggaacaa aacactattg gaaagatatt    900
ttctggcctg atgttccctg gtggctgaag gtacctatac ccatgatgcc gtttatcgaa    960
tttttcggtg tatttaccaa accgtttgcc ttgatgatcc gtctgtttgc caacatgttg   1020
tccggacaca tggccatgtt agtgcttacc tgcctgatat ttatatcggc aagcatggga   1080
```

```
ccggctatca atggttcgct tacggtggct tccgtattat tcaacatctt tatgaatttg    1140
ctggaagtgt tggttgcctt tattcaggct tatgtgttca cgatgttatc tgctgtattc    1200
atcggactgg cccaggaagg cggtaaaaaa gaagaagtaa aagaataa                  1248
```

<210> 326
<211> 2658
<212> DNA
<213> B.fragilis

<400> 326
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gtgctaatta gatttaacat gagactaaaa acaatcctac tgaccactat ggccaccggt    60
tcattttgt gcgagcctgt tgctgctatg tgtattgaac ctcccgcaac tcctgatatg     120
ggatggtttt tgaaaaagaa aaaaagagt aatccccaag acagtattaa ggttaagaat     180
gagtatgaga aattaacagg aagcgatagt gtcgttcgtc gtggtatgtt caatgtatac    240
caaaagaaga acgattatta ctttgagatt ccttccaccc tgttggggcg tgatatgctg    300
gtggtgaata aactgcaacg ggtacctgca gaactgaatg aagccggagt gaatcgtgga    360
actaattatg agaatcagat gatccgcttt gagttggata aatcggctaa taaattattg    420
atccgtcaaa gtcgtccgtt acctatttca ccatctgaag atgccattag ccaatcggtg    480
aaggataatt atatttctcc gctgatagcc gggtttaagg tagaagcata taataatgat    540
tctaccagca tactgattaa agtgaacgat atatatgatg gtacagagac aagcataaat    600
aacgtattta ccaatattaa tcttggcaca tcggccatca agaatttatc aagaattcta    660
tccatcaagt cctttgataa taatgtggta gcaacctccg aactgactac tcgtgtgacc    720
gaaggtacta ctactatcta tgtgacggta gaggttagtt cctctatttt gttgcttcct    780
gaagtgccga tgaccggacg tttggataat ccgcgtgtgg gatatttcac taatcctctg    840
actaatttca gtgatggaca acaacgggta aataaaaaac aatttataac tcgatggcgt    900
ctggagccca ggcctgaaga tcgggcagcg tatttacgtg gagaattggt agaaccccga    960
aaacctattg tcttttatat agaaaattcg acaccttatc gttggaggaa gtatattaaa    1020
caaggaattg aagactggca agtagccttt gaacgtgccg gatttaaaaa tgccattatc    1080
gctaaagata ttaccgagga catggaggta gatatggatg atgtgaatta ttctgtgctg    1140
acttatgccg catctaccaa agcaaatgca atgggacctt ctattcttga tccgcgttcg    1200
ggagaaatcc ttgaggctga tatcatgtgg tggcataatg tactttcaat gcttcaggag    1260
tggattacgg tacaaacagg tgtagtgcgt cctgaggctc gtggtgttgc tttaccggat    1320
agtctgatgg gagatgccat cgcgctttgtt gcctgtcatg aagtgggaca ttcactcgga    1380
ctgcgccata acatgatggg atcatgggct tttcctacag attctctccg ttcgaaaaca    1440
tttaccgacc gaatgaattc gacttcatcg tctatcatgg attatgcccg ctttaactat    1500
gtggcacagc cgggtgatgg tataaaggca ctttctcccc acatcgggcc gtatgatatg    1560
tttgctatag aatatggtta tcgttggtat ggcaagcaaa caccggaaga agaaaaagaa    1620
ctgttgcagg attttttagc gaaacacact gatcggcttt ataaatatag tgaggcacag    1680
gatccgcggg atgccgttga ccctcgtgca cagaacgaag atcttggcga tgatccgatc    1740
cgttcttcac agtatggcat tgccaatttg aaatgtattg ttccccaaat cattcaatgg    1800
acaactaccg gagagaaagg acagacgtac gaagaggctt ctcgtttgta ttatgccgtt    1860
attaatcaat ggaataatta tctttatcat gtaatggcga acattggagg tatttatatt    1920
gaaaatacaa cggtaggtga tggtgagaaa acttatacgt ttgtggaaaa ggagaagcag    1980
caggctgctt tgaggttttt gcttgatgag gtgctatgct atccgaaatg gttgttcgac    2040
cctgaaatag ctcaatatac ttatctgctt aaaaatactc ctttgggagt agtagagaat    2100
gccccaacac aagtgctgaa aaatgcacag gcttatgttt tttgggattt actgtcgaat    2160
aatcgcctga tgcgtatgct tgagaatgaa tcggtaaacg ggaaaaaagc cttcacagct    2220
gttgaattga tggatggttt gcataaaagt attttttgctg taacagagcg tggtggactg    2280
cccgatgtta tgacacgtaa cttacagaaa ggttttgtag atgcattgat tactgctgct    2340
gccgaaagcg agggagtgaa agttaacaag aaattgattg ataatcactt cttgttcgac    2400
tttcagacac cgatttgtag ttgtgatgac catgcacatc gttcggcaca tactgatcgc    2460
atgggggctc gccgtgaact gaattttttat gggtctcaga taaaccgtat ttccgacgcc    2520
atttcagtaa aacgtggtga attgcttcgc attaaagatt tgcttcaaag ccgtttgggc    2580
acatcggatg tagctaccaa atatcactat aaagatttga ttttacgcat aaatactgcg    2640
ttgggcattt cgaaataa                                                   2658
```

<210> 327
<211> 933
<212> DNA

<213> B.fragilis

<400> 327
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aatacaaaca gggctgatat gagacaattg tactacactt tccgaactct tctccgtgga    60
agaggtggaa atctgaccaa aataatttcg ttaactttag ggcttttggt cggcatcctg   120
ttatttgcca gggttgcatt tgaattaaac tatgatagct attatcaaga accggaaaat   180
cttttttctaa ctttacgtac agttgtttcg caaggtgaaa agaaagagcc tgtttgtagt   240
aattacggaa aacttccagc agcaattcgt gaaaattttc ctgatgaagt ggaagatgca   300
actttgattg acttatttag tcgcagttcg ctttaccatg aaggccagga aaagaaagat   360
gcaatactgg ctacttcccg aagccatatt ttttccactt tgggcgttaa agtactttcc   420
ggaaatgtgt ctgaattgga taatatggat gcactgttta tatcccgttc tcttgctcaa   480
agtcttttg cagatgccga tcctattgga aagacagtaa tgattaatat tgattatcca   540
ttgactgttc gaggtgtttt cgaagatatt ccggaaaatg ccgagtttcg gtttgatggg   600
gtctattcat ttgtgactcg tgctaataga ttcagagatg aacgtggtgg atggcggggt   660
gatatcagct atacatgtat ggttcgtttc cgccatccgg aagatgtaga gaaagtggcg   720
gcacgtatgc ctgatatgct gaagaagtat atacagtata ataaagactg gtttgaagaa   780
ttttcgtttta taactccttc acagtttcat ttgcagaaaa aggaatcacg taaaattatc   840
agtattctat cgattctcgg atttgccatc ttgctgattg ccggcatgaa caatgtactt   900
gatttctatt tcatcattgg ctcaacgagc taa                                933
```

<210> 328
<211> 399
<212> DNA
<213> B.fragilis

<400> 328
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cagaaattaa gaatggaaaa attcagcacc agaaaaagaa tacggagctt cggatatgcc    60
tggaaaggta tccgaagttt tgtaagcaaa gaacataatg cctggataca ttgcacggca   120
attattatag taacagtggc cggattctgt ttcggcatca cccggaacga atggatggct   180
atcatacttt gttttggagt agtactggca gcagagggat tcaacacggc tatagaaaga   240
ttggtcaatc ttgtatctcc ggaacgtaat ccgatagcag gtgatgtgaa agatatcgca   300
gcgggttccg ttctgatatg tgctatagtt gctgccattg taggaattat catcttcatg   360
ccttatgtac ttgctgtttt actgtgtaat atgggataa                          399
```

<210> 329
<211> 1536
<212> DNA
<213> B.fragilis

<400> 329
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tatataaaaa gattgcttat gtcacagatt atcggacata tctctcaggt aattggccct    60
gtggtcgatg tgtattttga aggtacagaa tcggacttga tattgccaag tatccacgac   120
gcattagaga taaaaaggca caacggcaaa aagctgattg tagaagttca acaacacatt   180
ggtgaaaata ccgtacgtac ggttgccatg gatagtaccg acggcttgca gcgcgggatg   240
aaggtatttc cgacgggagg tcctatcaca atgccggtag gcgaacagat caaaggacgt   300
ttgatgaacg tagtcggcga ctccatcgat ggaatgaaag aactcaatcg cgacggtgca   360
tattctattc accgtgatcc tcccaaattt gaagatttaa ccactgtaca ggaagttctg   420
tttaccggaa ttaaggtgat agacctgctt gagccttatt caaaaggagg taagatcggt   480
ttgtttggcg gggccggagt gggtaaaact gtacttatta tggagctcat taataacatt   540
gccaagaagc ataatggttt ttccgtattt gccggagtgg gagagcgtac ccgtgaaggt   600
aatgatttgc ttcgtgagat gattgaatcg ggtgtaatcc gttatggaga agcattcaaa   660
gaaagcatgg aaaaaggaca ttgggacctc tcgaaagtgg attataatga ggtagaaaag   720
tcacaggcta cattggtgtt cggacagatg aacgaacctc ctggagcacg tgcttcagtt   780
gctttgtcag gattgactgt cgctgaatct ttccgggata tgggggcaaa gtcgggagcg   840
agagatatat tgttttttat cgataatatt ttccgtttca ctcaggcggg ttccgaggtt   900
tcggctttgt tggggcgtat gccttctgcg gtaggttatc aacctacgtt ggctaccgaa   960
atgggtgcta tgcaagaacg tatcacttcg acaaaaacgg gttctatcac ttcggtgcag  1020
gctgtttacg taccggctga tgacttgacc gaccctgctc cggcaacaac ttttacccac  1080
ttggatgcaa cgactgtgtt gagtcgtaaa attactgagc ttggtattta tccggcagtg  1140
```

```
gatccgttgg agtctacttc tcgtattctc gatccgcaca ttgtgggtca agagcattat      1200
gatgtcgcac aacgtgtgaa gcagattctt caacgcaata aagaattaca ggatatcatc      1260
tctattttag gtatggagga attatccgac gccgaccgtc tggtggtaaa ccgtgcgcgc      1320
agggtacagc gtttcctgtc tcaaccattt acagtggccg aacagtttac cggagtaccg      1380
ggagcaatgg tggccattga agatacaata aaaggattca aaatgatttt ggatggtgaa      1440
gtagattatc tgcctgaacc ggcgtttctg aatgtgggaa ccattgaaga agctatcgaa      1500
aaaggtaaga aactgcttga acaggctaac aaataa                                1536
```

<210> 330
<211> 1809
<212> DNA
<213> B.fragilis

<400> 330
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caaatgaaaa gacacgtttt tattctttta ttgtcttttg ccggagtttt gacttctgct      60
tttgctgcca gtaggcaagt acaaggagtg gtgatctctt cagaagataa tatgccgttg      120
atcggtgctt ctgtctatat aaaagcagaa gacctgtcga aagatggtaa ttctccgaca      180
ataacaggag taattaccga tatagatgga aaattcaata tttcagtacc ggaggggggtg      240
acacgtttat tctgcagtta tgtaggacat gaagtacagg aactcaagct cgttcccgga      300
aaagatcaat atgaaatcac gcttttccca tcagctcaga tgcttgatgc tgtggtagtg      360
actggttatc agacagtgga gcgccgtaag ttgacagcag ctgtcgggaa actgaacatt      420
tcggatgaaa ccatcggtgc tgtgaaaagt attgaccagg cactggccgg gcaaattgcc      480
ggtctttccg taacctctac ttccggagcg ccgggtgcac ctgcaaaaat acgtattcgt      540
ggtacttcgt cattgaacgg aactcaggat ccattgtggg tattggatgg tattccgttg      600
gaaggtacgg atgtacctca gtcgaatgta ttgaatgatg tttctaatat acagcaatcg      660
tctattgccg gactgaatcc tgcagatatt gaaaatatta ctgtgctaaa ggatgcggca      720
gctacagcca tttatggagc acgtgctgca aatggtgtaa ttgtgataac gactaaaaaa      780
ggaaaagtgg gaaaaccggt gattaatttc tcctcgaagt ttacttatat gcctacattg      840
agtacaaacc gactcaatat gttgaattca caagagaaag tagatttgga acttgaattg      900
cttcgttcta attttgcgta cggtgacaat aaggggggag tttctaaaat aatttccggt      960
tacggattga ctgatgccta taaaaaaggg gggtggagtg cgctgactcc cgaagcccaa      1020
acggatataa gtcggttgcg gaatacagaa actgattggg gcgatattct tttccgcgat      1080
gcattcaatc aggagtatag tttaagtctt tcgggaggta acgaacgggt gacttattat      1140
acttctatcg gatattatca agaaaatggt aatgttaaag gcgtcgggct ggatcgtctg      1200
aatattgtag cgaagacttc atataaagtc aaccggatgt tgaaattcgg agtttctttа      1260
tttgttaatc gccgtaacaa taaaacctac ctgaccgata cttatggatt ggtgaatccg      1320
gtatactatt cgcgtaaggc taatccatac tatcaacctt tcgatgtaaa cggaaattat      1380
gtatatgatt tcgatgttca gaacaattct gatacggatt tagggtttaa tatttttgaa      1440
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gagttacgtt ttaatgataa actgaagttt acaactcaac ttggtttgca attggataaa      1560
gcatcgaaag aacagattgc cgataaggag agttttttcaa tgcgtataat tcgcaaaaac      1620
agtaaatatt gggattctgc ctcccaaagc aataaatact ttattccgga cggaggagtg      1680
cataaagcgt atgagaatac gaactcccag attacctgga aagcaatggg agagtaccgg      1740
gacagtttca atgatatcca cgaactggaa gtaatggtag gtaccgagtt gcgtaagcac      1800
ttggtatga                                                              1809
```

<210> 331
<211> 1593
<212> DNA
<213> B.fragilis

<400> 331
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ttttttttccg ggtttttgtag ggtgtcctct tcctttttttt gtattttttgg gcatgaatta      60
ataaaattag atagtatgat aacacctgaa gacaaagaat tgcttgccaa aaagggcatt      120
tcggaagtac aaatcgctga gcagttggct tgcttccaaa aaggctttcc ttatttgaag      180
ttagatgctg ccgcatctgt agaaaaaggc attttggctc ctgatgccga ggagcagaaa      240
gcttatcttg cagcatggaa tgcctatacc aattcagaca aaacgattgt gaagtttgta      300
cccgcttcgg gtgctgccag ccgtatgttc aagaatctat ttgaatttt ggatgctgac      360
tatactgaac ccactacaaa gttcgaacaa actttttttg aatcgattga aaaatttgct      420
```

```
ttttatgatg acttgaatac ggcttgtgtg cggacagaag gcaaaggtat tcctaccctg    480
attgcagaag gcaattataa agcggtcgtt tcaggattgc ttaatgtagc gggactgaat    540
tacggtgcgc ttcccaaggg gttacttaag tttcataagt atgaagaagg ttcgcgtacc    600
ccgcttgagg aacatttggc agaaggtgct atgtatgctg ccggaaaaag cggaaaagtc    660
aatgtgcatt ttaccgtctc taccgagcac cgtgaactgt ttaaatcatt ggttaccgaa    720
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aagctttttgt tccgtcccgg cgggcatggt gcgctgattg agaatctgaa tgatctggat    900
gcggatgtta tttttattaa gaacattgac aatgtggttc ctgataaatt gaaaggcgat    960
acagtgcttt ataagaaact gattgccggt gtactggtat ctctccagaa gcaagctttt   1020
caatatctgg aattattgga tagtggtcgt tatacacatg agcaggtgat ggatatcctg   1080
caatttgtac aaaagaaact tttctgtaag aatcctgaaa caaaagatct ggaagatgcc   1140
gagttggtca tttacctgaa gaataaattg aaccgtccga tgcgtgtttg tggtatggtg   1200
aagaacgtgg gcgagccggg cggtggtccg ttcctggcat ataatagtga tggaactatc   1260
tccctgcaaa tccttgaaag ctcacaaatc gatatgaata tccggaagc aaaggaaatg    1320
tttgaaaagg gtacgcactt caacccggtc gatctggttt gcgccgtacg tgattataag   1380
ggtcataaat ttgatttggc gaaatatgtg gataaagcta ccggcttcat ctcttataag   1440
tcgaagagtg gtaaggatct gaaagctctt gaacttcccg gtttgtggaa tggtgctatg   1500
agcgattgga gtacggtatt tgtggaggtt ccactttcca cttttcaatcc ggtaaagact   1560
gtgaacgacc tgttgcgtga acagcatcag taa                                  1593
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<210> 332
<211> 2595
<212> DNA
<213> B.fragilis

<400> 332
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cttattatta tattgctttc ttctttcttt tgctttaact ttgtcgcaaa gtattattgc     60
atggaagaga accacgaaat agaattagcc tggcaagtca ttgaaaatac cggtacgcat    120
cttttttctga caggaaaggc cggaaccgga aaaacaactt ttctccgtcg gttaaaagaa    180
cttaccccaa agcgtatggt agtggttgca cctacgggga ttgctgccat taatgccgga    240
ggtgtcacta tacactcctt ttttcagttg aacttcgcac cttacattcc ggaaagcaca    300
tttaattctg ctcagcaagg ttttcataaa ttcggaaaag aaaaaatcaa tattatccgt    360
agtatggact tgttggtgat cgatgaaatc agtatggtac gtgccgatca actggatgca    420
attgatgctg tactgcgtcg gtatcgtgat cgctcgaaac cttttcggcgg tgttcagctc    480
ctgatgatag gcgacttgca gcaattggct cccgtggtga agaagagga ctggagcctg     540
ttgagctctt actatgatac agcatttttc tttggcagtc attcactgaa agagacggaa    600
tatatcacga tagagttaaa gaaagtctat cggcaaagtg atacggaatt tgtcggatta    660
ttgaataaaa tcagagagaa agaggcagac gacgctgttc tggaagaatt gaacaaacgt    720
tatcttccgg gattccgtcc gagagaggaa gaaggatata tccgactgac tacacataac    780
tatcaggctc agcaatataa cgaccgacaa ctgctttctc tttcaggaag agctttcagt    840
ttccaggcga aggtggaagg cacttttccg gaatcggcat acccggctga tgaaatgctt    900
accgttaagg aagggggctca gataatgttt attaaaaacg attcttccgg tgaacatcga    960
tattataatg gaatgatcgg tttggttacg gctgtcagta aagatggcat ccgggtgaaa   1020
gggaacggag aatcacagga ttttctgctt gaaaccgaag aatggacaaa tagtaaatac   1080
agcctgaatc cgcagacgaa agagattacc gaagaggtgg aaggtacttt ccggcaatat   1140
cccattcgtc tggcatgggc aataaccatc cataaaagcc aggggttaac tttcgaacgt   1200
gcaatcattg atgcaaatgc ctcttttgcc catggccagg tttatgtcgc tctgagtcgt   1260
tgtaagtcgc ttcagggatt ggtgcttagt tctcctttaa ggcgagagtc cattatcagt   1320
gacgatacga ttgatgaatt tacccgtaat gccggagaga tgactcccga caagcataaa   1380
ttggctctat tgcgtcaaca ttacttctat gaattgttgt gcgaacagtt tgattttcat   1440
ccgattgaac agcattttttt acgtttgctt cgcttgcttg acgagcattt atatcgtctc   1500
tatccaaagt tgttggaacg atataagaca actgccgatc tgtataaaac gcagataatg   1560
aaagtcgccg atacatttaa actgcaatat tctgccctat tgatggaggc tgaagattat   1620
accgccaacc cgaaattgaa tgaacgggtt atggccggtg cccactattt ccgtcaacat   1680
ctggaagatt tattaactcc gctgattact tctacaaaag tagaaacgga taataaagaa   1740
ttgaaaaaga aattctccga agcggcagat gcaatgaaga cagcattgca cgtaaagctg   1800
ggaaccttgt gctataccga gaaggaaggt ttttctgttt ccgcatttct aaaacagaag   1860
gctgttctta cgttatctgt ttcgggagga gaagctgcgt cctcttccgg aagatcggag   1920
```

```
cgtaaatccc ggacagccga gaaaatagaa gtaccgactg atattcttca tccggaatta    1980
tataagcaat tgattgcctg gagaaattct gaagctgcaa aagctggttt gcctgtatat    2040
accatcatac agcagaaagc aattctgggt attgtaaatc tcttgccgaa tgatgcggct    2100
tcactgatac gtattccgta tttcggaaaa cgcggtgccg aaaaatacgg tgatgccttg    2160
cttgaaatgg tgaaccgata cgtagaggag catggcatag aacgtccgca aatgccaaca    2220
gcgacgttga ctgtcaataa tgggattaaa acgtcgaaag agcccaaacc tttaaaagag    2280
gctaaatcgg tgaaagaacc gaagccagat accaaagagg taacgtatcg tcttttcagg    2340
cagggagaa gtattgaaga aatagccagg gaacgcgagc tggtttccgg aaccatagcg    2400
ggacatctgg aacactatgt acgctctggt gaagttaaaa tagagcagtt ggtggcaaga    2460
gagaaaatca cgaaaatcat ccgttacgta caggcccatg gaagtgataa aggactgacg    2520
gttattaaag cagctttggg ggatgatgtc tcatatgcag atataaggtt ggtacttgct    2580
gccggaataa aatag                                                      2595

<210> 333
<211> 1587
<212> DNA
<213> B.fragilis

<400> 333
attaaccca tgaaaaacta tttaggactg attttcctct tgtttgcttt tacagcaacc     60
gcacaaaaca atcgttcagc cctgttgcct atgcccaatc acatagagca agtgcaaggt    120
aaacctttta gcttaacagg taagaacatc acgattcacc ccggacaacc ggaattaaag    180
tttgcggcta ctactctgca aagtatactg aaagaccgca tgcaagtaga cattcccctt    240
tccggctctc gccaatcccc catccggtta attattgatc cacaattgga aggaaaagaa    300
cattatcaac tcaaagttga ccagaaaggg atgaccatta gcggagccag tgcagcagcc    360
gttttctatg gtgtaatgac tgtcgatcaa gttctcttgg gagatgtatg ctccagcaat    420
cggaaagaaa tgactcctat cagtatcgat gatgcgcctc gctttggcta ccgggcttta    480
atgctagacc ctgcccggca ttttttacca atagaagatg taaagttcta catcgatcag    540
atggtacgct acaaatataa tgtgcttcaa cttcacctga cagatgatca aggatggaga    600
atcgaaatta gaaagcatcc gaaacttacc gcaggacaat cttttatac tcaagaagag     660
ttggccgacc tgattcgtta tgcagccgaa cgccatgttg aaatagtgcc ggaattggat    720
attccgggac acactgtcgc tgtattagcc gcttatcctg aactgggatg tacacacacc    780
gataccattg caaagaatgt aggtgagact gtaaacttaa tgctttgtgc caataatgaa    840
aaagtgtatg aagtgtacaa tgatattat gatgaagtaa gtgctctctt ccttcacgt     900
tatattcacc tgggtggtga cgaagcagtt atagaaaaga actggaccaa atgtgaacgt    960
tgccaaaaga tgatgaagga actgaaatac gaaaaggctt cccaattaat gattcctttt    1020
ttcagccgta tgctcagttt cgtagaggct gatggaaaat accctattct ctggtgtgaa    1080
ttagataaca ttcgcatgcc ggccaacgat tatctgttcc cttaccctaa aaatgtaaca    1140
cttgtgagct ggagatacgg attgacgcca acttgccaga aactgaccca acagcatggt    1200
aaccctctga ttatggctcc gggagaattt gcatatctgg attatccgca gttcaaagga    1260
gatcttccgg aatttaataa ctggggaatg ccggtaacta cactcgaaac atgctatcag    1320
tttgatccgg gatacggaaa acccgcagca gaacaggcac acattctggg agtaatggga    1380
acactttggg gagaagcaat aaaggacatt aaccgagtga catatatgac ctatccccgc    1440
ggtctggcac tggcagaagc aggatggacc caaatggaac atcgcaattg ggattctttc    1500
aaagaacgtt tatatcccaa tctgaataac ttaatgaaaa aaggcgtttc aatacgtgta    1560
ccattcgaaa tagtaaaaag aaaataa                                        1587

<210> 334
<211> 948
<212> DNA
<213> B.fragilis

<400> 334
aataattaca tgaaaagaat cttagttagc ggaggtgcgg gtttttattgg ttcgcatctt    60
tgtacccggc taatcaacga ggggcacgac gttatttgtc tggataattt ttttaccgga    120
tcaaaagaaa atattatcca tttgatggat aaccaccatt tcgaagtggt acgtcatgat    180
ataacatttc catatagtgc tgaagtagac gaaatataca accttgcctg cccggcgtct    240
cccatacatt atcagtacga tgccattcaa accattaaaa catccgtaat gggagctatc    300
aatatgttgg ggttagcccg taggctcaat gctaaaatat tgcaagcttc aaccagtgag    360
```

```
gtttatggag atccggaggt tcatccgcaa cctgaatctt attggggaaa tgtcaatccg    420
atcggcatcc gttcttgtta tgatgaaggg aaacgttgtt ctgaaactct ctttatggat    480
tatcatcggc agaataacgt acgcattaaa attgttcgta ttttcaatac atacggtcct    540
cggatgttgc cgaatgacgg gagagtggtt tctaattttc ttatccaggc actgaagaac    600
gacgatatta ctatctatgg aacaggtgag caaacccgta gcttccagta tattgatgat    660
ttggttgagg gtatgatccg gatgatgaat acgggtgatg attttatcgg accgataaat    720
cttggcaatc cgaatgaatt ttccatgctt cagttagcgg agaagatcat ccagaagacc    780
ggatcgaagt cgaagattac ttttaagccc ctgccgcacg acgatcccca acagcgtaag    840
cctgatatca gactggcaca ggagaaattg ggttggcaac cgactatttt gctagatgaa    900
ggtttggatc gtatgattga ctatttcaaa atgaagtata agttataa                948
```

<210> 335
<211> 375
<212> DNA
<213> B.fragilis

<400> 335
```
ttttgtgaca taagccggaa agcttgtttt ttatgtcaaa cccctaaagc gattacgatg     60
gatttagaaa aggtattaat tagagagata aacaatgata gtcgtatttt tctgtataaa    120
gagggagatt gctggagtgc gcacgataat tccgcacggc atctttgctt tttatattcg    180
cagttcaatg cgtatgatcg catttatcag gcgtatgaga ttgtattaaa gtgcgttatg    240
ctgagtaatg caatgattga gaagtttatc gaacatacat tggtgagtac ggttcatgaa    300
gatgaaattg aaatctgcat tccaaaagaa aaaagagcag aatttgaaag ctggcgtagt    360
acgtccgggg tataa                                                      375
```

<210> 336
<211> 1380
<212> DNA
<213> B.fragilis

<400> 336
```
cttatacgca tggattggaa aataaggaat attaggctac aagaactcag ggagatttat     60
caagagaagc tgaaaaacat tgcttataga gtatacgagt cacattttca aaatggtatc    120
gtgaaacaag aggaacttga gggagaaatt atgtcttatt atcagcatac acaaccttct    180
ctacaagagt tttattcaca ctacgctaca cagtgggaac attttttacga gggacatgag    240
cttacagaca gtgcattttt acgctttctt gaaaattcgg cttaccctct acaaatgaaa    300
tataaccgtg gtgatttaaa tcttcaatat tatattgacc gatttcatac actcaaaaaa    360
cgatcaaaag agtggaaaca ccttcgtaat cttttttttg ataaatggta tcacctgttg    420
gcaaataatg aatataatta ccaaatagaa cgtatcaaca atctttgtga gagattctat    480
cgcttacaga aaaatattgc agatcaactt ccccaacgag gcaatgcccg tttaatgtgg    540
ctgttgagaa cacaccaaga acttgccaaa caactgtttc attatgatga aatagccaaa    600
aatcacccgg ctatcagaga actgacaaag atactgggaa agcagcatta tggtaaagaa    660
aagaaattcc gtatggttgc aggtatccac cgggaacaaa tcatcactca tgccactaaa    720
agtgatatta ccggagtatg tgaaggtaat gatttaaaca gcctcctacc catagagtat    780
tgttatctgt cagatcctgc tttgcaacca cttttctttg agcgattcaa caagaagaag    840
ctgcaaatga tggattatga atcaaaagat caacatcgca ttaaagatat aaaaatacaa    900
gggaatgaaa ttgtagaaga caatcaggt ccatttatca tttgcgtgga tacttcagga    960
tccatgagtg gagaaagaga agagttcgtg aaatcggcca ttcttgccat tgcagaactt   1020
acagaacaac aagatcgaaa atgttatctt ataaatttct ccaacgacat agcttgtatc   1080
gaaatcgaac gtctgggaca aaatatacag gaactggcaa actttctttg tcaaagtttt   1140
catgggggta cagatttaac tcccgcactt ctacacgcaa tacacattct aaaaacaaag   1200
tcctatcgaa atgccgattt agtaatgatg tcagattttg aaatgcctcc tttaaacgaa   1260
gaactttcag aggaaataaa aaaaataaag caaaataaga ctcatttata cgccctctct   1320
gtacataaac aaagtgaaaa tacctatttta aacgtctgca ataagttctg gtttgtttaa   1380
```

<210> 337
<211> 1644
<212> DNA
<213> B.fragilis

<400> 337

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tacgtaaaaa ttatgagtat gttctgtttt cagtgtcagg aaaccgcaaa aggtacaggt    60
tgtatcttaa gcggagtatg cgggaaaact cccgaagtag ccaatatgca agacttgctg   120
ctttttgtag tacgcggaat cgcagtctac aatcaggcat tacgcaaaga tggacgttct   180
tctgcccggg cagataagtt tatctttgac gcattgttca ctaccattac aaatgccaac   240
tttgataaac actccattat cgagaaaata aagaaaggac tggagctaaa gaaagatcta   300
agtaaccaag tcacaataga acatgcgccc gacgaatgta cttggtatgg tgacgaaact   360
gagtttgaag agaaagccca aacggtgggg gtactgcgaa cttctgacga agacattcga   420
tcattgaagg agttggttca ctatggtatc aaaggaatgg ctgcttatgt ggagcatgcc   480
tataacttag gatatgagaa tccggagata tttgcattca tgcaatatgc tttggctgaa   540
ttgacccgcg aagatattac tgtggacgaa ctgataaccc tcacactcgc tacgggtaac   600
catggtgtgc aggctatggc ccaactcgat actgccaata ccagccatta cggaaatccg   660
gaaatctccg aagtaaacat tggtgttcga acaatccgg gtatccttgt cagtggacat    720
gacttgaaag atattgaaga acttttgcaa cagactgaag gtaccggtat cgacatatac   780
acacacagtg aaatgctacc ggctcattat tatcctcagt tgaagaaata taaacacctg   840
gtaggaaact acggtaatgc ctggtggaaa cagaaagagg aatttgaaag tttcaacggt   900
cctattctct tcactactaa ttgcattgtt ccaccacgcc cgaatgcgac ttataaagat   960
cgcatctata cgacaggcgc aaccggcttg gaaggtgcta cctacatacc cgaacgaaaa  1020
gacggaaagc agaaagattt ctccgttatt attgagcatg cacggcgttg ccaaccacca  1080
gtggcaatag aaagtggtaa gattgtaggt ggatttgctc atgcgcaagt aatcgcactg  1140
gccgataagg tggttgaagc agtaaaaagc ggtgctatcc gtaaattttt tgttatggcc  1200
ggatgtgacg ggcgaatgaa aagtcgcagt tactacacag agtttgcaga aaagctaccg  1260
gcagatacgg taatcctgac agcagggtgc gccaaatacc gatataataa attacctctg  1320
ggggatatta atggcattcc tcgtgtactg gatgcaggac agtgtaatga cagttactca  1380
ttggctataa ttgctatgaa gttgcaggaa gtcttcggac taaaagacat caatgatctt  1440
ccgattgtat ataacattgc gtggtacgaa caaaaagccg ttattgttct gctggctctg  1500
ttggcacttg gagtgaaaaa gattcatttta gggccgacgc ttcctgcatt cttatctcct  1560
aacgtgaagc aggtactgat cgataatttt ggaattggcg gtatcagtac agcagacgaa  1620
gatattgcaa aatttttagc atga                                        1644
```

<210> 338
<211> 510
<212> DNA
<213> B.fragilis

<400> 338

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acaaagaaga ttatgtcatt gttactaccc gatagtggcc tgatattctg gatgctcctt    60
tcttttggaa ttgtattcgc agtattggca aaatacggct tccccgtcat tattaagatg   120
gtggaaggcc gtaaaaccta cattgacgaa tcattggagg tagccagaga agcaaacgcc   180
cagttgtcac gactgaaaga ggagggcgaa gctattgtgg ctgccgctaa caaggaacag   240
ggacgtatca tgaaagaggc tatgcaggaa cgtgaaaaga ttatttacga ggcccgcaaa   300
caagctgaaa tagctgctca gaaggaactg gatgaagtga acgacagat tcagattgaa     360
aaagacgaag ccatacgtga tatccgtcgg caggtagctc tgctttctgt ggatatagcc   420
gagaaggtca ttcgcaaaaa tctggatgat aaacaagagc agatgggaat gattgaccgt   480
atgcttgatg aagtattaac gaagaactaa                                    510
```

<210> 339
<211> 570
<212> DNA
<213> B.fragilis

<400> 339

```
cagaagaaga tggaagtcgg aataatttca atgcggtatg cgaaagctct gatggcttat    60
gctgaagaga gaggagcgga ggagaggctt tatcatgagc ttgtcacact ggcgcacagt   120
ttccgtactg tgaagggatt ttgtgccgtg cttgacaatc ctattgtttc tgttaacgaa   180
aagtttaatc tgatctgtac ggcagccgat ggggaccata aaccgagtga agaatttatt   240
cgtttcattc ggttggtact caaggagaga agggagacct atctgcaatt tatgagtctg   300
atgtatctgg atctttaccg gaagaagaaa cacatcggtg tagggaaact gatcactgct   360
```

```
gttccggtag acaaagctac agaagagcgt atccgacaaa ctgctgcaca tattttgcat      420
gcatatatgg agttggaaac agtggttgac ccttctatag aaggcggctt cgttttcgat      480
attaacgatt accgactgga tgccagtatc gctacacagt tgaagaaagt caaacaacaa      540
ttcattgata agaatcgaag aattgtataa                                       570


<210> 340
<211> 1437
<212> DNA
<213> B.fragilis


<400> 340
acaatgtact tgatttctat ttcatcattg gctcaacgag ctaagtctgt tggcatacat      60
aagtgtaatg gtgcttctga tgggcatatc tatcgtatgt ttctgtatga atcagcacta      120
ttgatattgc tttcttatt gttcgtgaca gtcctgttat tcacttttaa gttggagata       180
gaagatcttt ccggagcttc attaaaggct ttatttacat ggcaaactct gtgggtaccg      240
attttggttt ctttggtttt atttctggtc atcggactat ttccgggcaa gttgtttgcc      300
gctattcctg tgacacaagt tttccatcgt tttactgcac atcgttttgt ttggaagcga      360
tcattgcttt ttatacagtt tgcgggaatt gcatttattt taggcctgtt gatggttatt      420
cttttacagt atcatcaggt gatgacccgt gacatgggat ataaggtcga taatttggca      480
gttgggtggt cgccatatag agaaattgat aaaatggacg gtattctccg aggactgccc      540
atagttgagg agttttgtaa tgcaagtacg attatttatg gtggctacat gggtcaacct      600
tacacagatg cacatgggaa ggaatttatg ggacgtatcg aatttgttga tgaacattat      660
gttccggtta tgggacttca gattataaaa ggcaggaata tccagcaaga taaagagatc      720
ttgattaatg aagagatggt tcgtcaaatt ggttggacgg atagtcccat cggtaagaat      780
ctggaagatg gcaaaaataa ctttggtacg attgtcggag ttgtgaaaga ctatgttgta      840
caaagtgcgt acatgccaca ggctcctgta gcactgatga gtaatttgga atggatgaat      900
gtgcttaata aacggaatat tattttgaaa gaacctttg gtgagaacct ggctaagatt       960
aacacattga tgaaagaggc ttttccgaca gtagatattg tattccgttc tgcccgtcag      1020
gagattgata agcaatatca agaggtccgc cgtttccgta atgtcgtgat tatagcttct      1080
attgctatcc tgttgattgc tttgatggga ctgttcggct ttgtaaatga tgaaattcaa      1140
cgtcgtagca aagaaattgc cattcgtaaa gtgaacggtg ccgaagtgcc ggatattctt      1200
cgtttggttt ccgggaatat tttctggacg gcactaagtg ctgttctggt cggaatagta      1260
tttgcatata ttgtaagtaa taaatggctg gaacagtttt ctgaccgggt atcagtcaat      1320
gggggacatt ttcttgtcgt gatcataatt atcttgttgt tgatcatagg aagtgtcatc      1380
gggaggtcct ggaatgtggc taatgagaat ccggtgaaca gtatcaagaa cgaatag        1437


<210> 341
<211> 288
<212> DNA
<213> B.fragilis


<400> 341
agctttattg ttatttatt aattttttat ttttgtatat ttatgaatat gtacgttgga       60
aatcttagct ataatgttaa ggagtcagat ttgagacaag ttatggaaga gtatggagta      120
gtagaatcag taaaactgat cacagaccgc gaaacaagaa gatctaaagg gtttgcgttt      180
gtcgaaatgc cggaatcttc agaagcaagc aatgccatta agaattgaa cggagcagaa       240
tatgccggtc gtccgatggt agtaaaagaa gctttgccaa gaaattga                   288


<210> 342
<211> 921
<212> DNA
<213> B.fragilis


<400> 342
ccttttaatg tggatccgct aatttattca cttttacttg tatggtatga attaaaagtt       60
ataccttgc gcccgatttt taatttaaaa agattggata tggctggtta tatatcagat       120
gacacaagaa aagtgacgac tcatcgccta atcgaaatga agcaaagagg cgaaaaaata      180
tctatgctta catcgtatga ctacacaatg gcacagattg tcgacggtgc cggtatcgat      240
gtaattcttg taggcgattc cgcatcgaat gtgatggcag gtaatgtgac tacacttcct      300
```

```
attaccctgg atcagatgat ctatcatgga aaatcggttg tacgtggtgt aaagcgtgca    360
atggtagtag tggatatgcc ttttggctct tatcagggta atgaaatgga agggcttgct    420
tcagctatcc gcataatgaa ggagagtcat gccgatgcat tgaaactgga aggtggtgaa    480
gagattatag atactgtgaa acgtattctg agtgccggta tccccgtgat gggacatctt    540
ggattgatgc cacaatctat caataaatat ggtacataca cggttcgtgc caaggatgat    600
gccgaagcag agaaattgat tcgtgatgca catttactag aggaggccgg atgtttcgga    660
cttgttcttg agaagattcc tgcagcattg gcatcacgtg tcgcaagcga actgaccatt    720
ccggtgatcg gtatcggtgc cggtggagat gtagacggac aggtattggt aattcaggat    780
atgtttgggta tgaataacgg tttccgcccg cgcttcctcc gtcgttatgc cgatctttat    840
acggtaatga ccgatgctat cagtcactat gtttcagatg taaagaactg cgacttcccg    900
aacgagaaag aacaatatta a                                              921
```

```
<210> 343
<211> 1332
<212> DNA
<213> B.fragilis
```

```
<400> 343
gatgaaaaag tttggtttat gaaaatccat ttaaagttac tcacagagcg ctattggttt     60
cgtctcggac taagcctctg tttcgccata actgcggctc tgtcttatgc cgacagagac    120
ttcatttgga tgggattgag cctctgtttg ctactattca gcatttggtg gcaactttca    180
ctttaccgta ttcataccaa acgagttctt ttcatgattg acgccctcga gaacaatgac    240
agcgccattc acttcccgga agagcagata atgcctgaga cccgagaggt caaccgtgca    300
ctcaaccggg tcggacgcat attatataat gtaaagtcgg aaacggtaca gcaagaaaag    360
tattacgaac tgataatgga ctgtataaac accggtgtac tcgttctcaa tgaaaatgga    420
gcggtttatc aaaaaaataa tgaagcgctt cgcctgctcg gattaaatgt gtttacccat    480
atccgccaac tgaacaaagt ggatatacag ctgatgaaga aaatagaatt ctgccgtccg    540
ggagataaaa tacaaactat tttcaacaat gaacggggta caatcaattt atccattcgt    600
gtatcaggca tcactgttcg tgaagaacaa ttgcgcattc tcgcttttaa cgacatcaac    660
agtgaattgg atgaaaaaga aatcgattcg tggatacgac tgacacgtgt attgactcat    720
gaaatcatga attcggttac tcccatcacc tctcttagcg aaacactact atcgttggcc    780
gatacccggg atgaagaaat acgccggggc ttacaaacaa tcagtactac gggaaaaggc    840
ctgctctctt tcgtggaatc ctaccgccgt tttacccgta tcccgacccc ggaaccatcc    900
ttattttatg taaaagcttt tattgaccga atggtagagc tggcacgcca tcaaaacaaa    960
tgtgacaaca taacattcca tatagatatt gctcctgctg atctgattgt gtatgccgac   1020
gaaaatctga tttcgcaagt agtaattaat ctattgaaga atgccataca agctatcgat   1080
gcacaggccg atggaaagat tgaaataaaa ggacgatgta atgctgctga agaaatattg   1140
attgaaataa aaaataatgg ccctgccatt ccttcagata tagcagatca tatattcatt   1200
ccttttttta ccaccaaaga aggaggtagt ggtatcggat tgagcatttc acgtcagatc   1260
atgcgtctgt caggtggaag catcactctg ctgcaaggca aagaaactaa atttattctg   1320
aaatttaaat aa                                                       1332
```

```
<210> 344
<211> 723
<212> DNA
<213> B.fragilis
```

```
<400> 344
aacctgatgg ttatgattat gaagtggttg aattttaatt ccattattgg catggcagta     60
ctatcgctgc tgttttacac agaaaacgtc gctgcacaaa ccgacaaaaa cgataccaaa    120
caaaagatag ataccatcca gacaacacag ccggaataca gcaaatatga caaacgtatt    180
caccgttttc gtaaaggatg gaattcactt atacctacac acaacaaaat acaatatgcg    240
ggtaacatgg gaatgttctc gttcggaacc ggttgggatt acggaaaaag agatcagtgg    300
gaaacggatc tgttcttcgg cttcataccc aaacatgact cccatcgggc taagatgacc    360
atgaccttaa aacaaaatta catgccttgg agcctggagc ttgggaaagg attttcaacc    420
gaacctttgg catgtggtat ctattttaac actgttttcg gacacgaatt ctgggtacac    480
gagcctagcc gttatccgga aggatactac ggattctcgt ccaagatacg cacacacatc    540
tttctgggac aacggctgac atacgatata gatagagaac gccggttctt tgcaaaatct    600
gtgactctct tttatgagct gagtacctgt gacctattat tgatcagccg cgtaaccaac    660
```

```
agttacctgc gggctcggga ttatctgagt ttatccttcg gacttaaatt ccaatggctt    720
tag                                                                   723


<210> 345
<211> 255
<212> DNA
<213> B.fragilis

<400> 345
cttgatatat tcaacagcca gggtgaaggt ttttccggac ccggcggagg ctttatagac    60
aatgagttcg ctcattcaca gtttgtattg gataatgatt attttctttt tactatttcg    120
aatggtacac gtattgaaac gcctttttc attaagttat tcagattggg atataaacgt     180
tctttgaaag aatcccaatt gcgatgttcc atttgggtcc atcctgcttc tgccagtgcc    240
agaccgcggg gatag                                                      255


<210> 346
<211> 1269
<212> DNA
<213> B.fragilis

<400> 346
ttgtcttttt ctctctttta tcgtaatcat ttagtagctc gttcgggatt tattggaaga    60
aaagtagtat ttttgcgtca ttatatctta aaatattcaa tcatgaagaa aatacttta     120
ctcggatcgg gcgaattggg caaggaattt gtaatttctg ctcaacgtaa aggtcaacac    180
atcattgctt gtgattcata tgccggggca cctgccatgc aggttgctga tgaatgcgaa    240
gtattcgata tgctgaacgg tgaagaactg gagcgtattg taaaaaagca tcggccggac    300
attatcgtcc ccgagattga agccattcgt acggaacgtt tatacgattt cgaaaaagaa    360
gggattcagg tagtgccgag tgcacgtgcc gttaattaca caatgaaccg aaaggctatc    420
cgtgatttgg ccgctaagga actgggactg aaaactgcga aatactatta tgccaagtca    480
ttggaagaac tgaaggaagc cgctgagaaa atcggtttcc cttgtgtcgt gaagccttta    540
atgtcatcat cgggtaaagg gcagtcattg gtcaagagcg ctgccgagtt ggaacatgct    600
tgggaatatg ggtgtaatgg cagccgtgga gatattcgtg agctaatcat tgaggaattt    660
atcaaattcg atagtgagat aactttgctt acagtgacac agaagaatgg tccgactctg    720
ttttgtccgc ctatcgggca tgtacaaaag ggtgggggatt atcgggaaag tttccaacct   780
gcacacattg atcctgcaca cttgaaggaa gcagaagata tggctgaaaa agtaactcgt    840
gcattgaccg gtgcaggact gtggggagta gaatttttcc tgagccatga aaacgggggtt   900
tacttttcgg aactgtctcc acgtccacat gatacgggaa tggtgacatt ggccggaaca    960
caaaatctga atgaatttga acttcaccta cgtgccgtat tggggttgcc cattccggga    1020
ataaaacaag aaagaatagg agcgagtgcc gttattctgt cgccgattgc cagtcaggaa    1080
cgtccgcagt atagaggtat ggaggaagtt accggagaag aggatactta tctgcgtata    1140
tttggtaagc cgtatacacg tgtgaatcgg cgtatgggag tagtgctttg ctatgctcca    1200
aacggttcgg atctggatgc tttgcgtgat aaggcaaagc ggatagccga taaagtagaa    1260
gtatattaa                                                             1269


<210> 347
<211> 645
<212> DNA
<213> B.fragilis


<220>
<221> unsure
<222> (97)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 347
aataagagat ttatgagatc attaattgga aaacaagcgc cgaaattcga tgccacggct    60
gtaatcaatg ggcatgaaat cgttcagaac tttcgtntgg atcagtataa agggaaaaaa    120
tacgtagtat tcttcttcta cccgatggac ttcactttg tatgtcccac cgaactgcac     180
gcatttcagg aaaagctcga agagtttgaa aaacgtgatg tcgctgtggt aggttgttcg    240
```

```
gtcgactctg aatattctca cttctcttgg ttgcagatgc ccaagaacga aggaggtatc    300
cagggcgtga agtatcctat tgtatccgac ttttctaagt caatctctga gagttatgga    360
gtgctggccg gaagctatgc ccccgatgaa aatggcaatt gggtatgcga agggacaccg    420
gtagctttcc gtggtctgtt cctgatcgac aaggagggcg tagtaagaca ttgcgtcatc    480
aacgacttgc cgctgggacg taacgtggat gaagtattgc gcatggtaga cgctttacaa    540
cattttgaag agtatggtga ggtttgtccg gccaattggt cgaaaggcaa agacgccatg    600
aaagctaccg aagacggagt agccaactat ctgagtaagc attaa                    645
```

```
<210> 348
<211> 234
<212> DNA
<213> B.fragilis
```

```
<400> 348
gatcatttgt tttgtgtgat tatttgcaac ttgatactta aaaacaacag tttattcttt     60
atacggaata aaagacatta ttacgtatta aaaaagtctc ttaaatattt gccatttaaa    120
aataaaggtt tacctttgca cccgaaatca agaacgcttg atggcaatgc actcttagct    180
cagctggtag agcaattgac tcttaatcaa tgggtccagg gttcgagtcc ctga          234
```

```
<210> 349
<211> 900
<212> DNA
<213> B.fragilis
```

```
<400> 349
actttaactc caaagaaaag cgaatattca cctctatatc ataacaatat gcacaccatt     60
cagataaatg atgattgtta ccgagttccg gaaagttggg atgaactcac cgaaaagcaa    120
ttgagctacc tggttaatct tacacaaagc gatattccca tcgaagaact gaaggtacac    180
atgatgctat attgtctcaa tgcacatgtt tgccggtatc gggatatcta tcgccatcaa    240
gtaaagatca gcattgggac tcccggcaat aaaatccctt tccggacaca caagaagaaa    300
tatttgcttc ttcctgaaga agtcaatcgg ctggccaaac tcttcaactt tctgttgatg    360
tgcgaaaagg ataccgaaat gaaataccat gtacacccgg aactcaccgt caatccctat    420
cgggcattct tttgccggtt ccgtaaattc cgtggtccgg aagatggcct gctcgatatt    480
cgcttcgaac agttcatgca cctgcaacac tatcttgacg ccataaatca ggacccggaa    540
caaattaacc atgctctggc ctgtttatgg cacacaagca aaacattcaa tatcaatcgt    600
ctggagaaag atgcttccat tctcagccat cttccccaca gagtgaagat gattatgtac    660
tggtacatta tagggagcct ggcctatctt gccaatggct ttccccgtat cttttccgga    720
aatggaaaga gtaatggtcg tgtctttgat tcgcaaatgc gtctttttaga ctccctcgca    780
cagtcagaca tgaccaaaaa gcctgaaata aaaaaaggat tcctgatcga tgccctgtat    840
acaatggatg aatctctgag aaaacaacaa gagctgaatg aaaatatgca gaacaaataa    900
```

```
<210> 350
<211> 498
<212> DNA
<213> B.fragilis
```

```
<400> 350
cccctgactt ttatggagat atacaaccac tttgaatatg gcaaaacact tgccatccgc     60
ttaaagccta ttgcccacac acccgaaaag cccagattct tcaccgcttt cggacttgag    120
gacttatata attttaatga taaactatca tccgtatccg gcatgatcct gattgcagtt    180
gatggttgtg aatctgaatc aaaacgaaac gaatccgatg cgcttaataa caatgatata    240
ttctctttca ttgttgtaca gaacactgtt tctgatcgtc cggaaacagt caaccaggca    300
gcaaagaat gcaaagctat cgcaaaacaa attcggaacc atatcctgca agaccccgac    360
atttcagaat tcattgacga taccattcaa tttaatggta ttgggccgat tggtgataat    420
ttctatggcg tagtactgac attttctttg gttcaacctg aaacctattt cattgatcaa    480
acatactggg aggattaa                                                   498
```

```
<210> 351
<211> 204
```

<212> DNA
<213> B.fragilis

<400> 351
atctatcccc caacttccaa cgtatactta aagatgcata tgtcggacaa atacgaaatg   60
ctgtcgctca tacacaatac cattgtattc aaggaggaat cttatatgac aactactcac   120
catcaagtaa atattctatc ctgcaaggtc tttcttatga agaatgggag aagaaatatg   180
tctactcttt tttcatattt atag   204

<210> 352
<211> 714
<212> DNA
<213> B.fragilis

<400> 352
atgagccaac cttttttttca gtttaaacag tttactgtct ggcacgataa atgtgccatg   60
aaagtaggca cagacggtgt cttgctcgga gcttggaccc cggtagagtc ctcggcacgt   120
attcttgata ttggtaccgg taccggattg gtggcactta tgctggccca acgctgttcc   180
gcttccgtta ttgctcttga aatagacgga acagccgcac aacaggctgc agagaatatc   240
acccgttcac cttggggaag caggatagaa gtcgtttgcc aggatttcag gttatacagc   300
aataagaata atagcctgaa atatgataca atcgtatcaa atcctccata tttcacagac   360
tccctgaagt gtccggacag ccagcgcaac acagcccgac ataacgataa cctgtcttat   420
gaagagttgc tgaagggagt atcgaattta ctttcgccaa atggtacttt tacagtagtc   480
ataccgatgg atgcaagtga ttcttttaaa gacatcgcat cttcacaagg cctgtatcca   540
tcccgccagc tcttggtcat cactaaaccg ggagcacccc caaaacgtac cttgatctca   600
tttacattta taaaacaaga ctgcaaagaa gagaaattat taacagaagt ttctcgccac   660
cgttacagtg atgaatacat taaattaacc cgggagtttt atttgaaaat gtaa   714

<210> 353
<211> 480
<212> DNA
<213> B.fragilis

<400> 353
gaaccggagc ccaacctatc ccgaaagaag ataatagccg gttaccacaa ccgacaggta   60
aactcgtttt ctaacttaaa cataaaaaca atgagtgtaa acaaatgtat ttttatcggc   120
aacatgggac gtgatgccga ggtccgtacc actgaaaccg gcatcaaagt agcccaattt   180
tctattgcat gtacagagcg tgcttataca aacaaagccg gtcaaacgat tccggagaga   240
accgaatgga tacccgtcgt agcctggagg agattggcgg aaaccattga gaagtacacc   300
cacaaaggaa gcaaactgta tattgaaggc agattcacaa cccggaagta tgaaacaaat   360
gacggccaga aacgaaccgt ttctgaaatc gtagccgaaa gtattgaaat gctcgatccc   420
aagcgggatg ctccctcact ccctccggaa cccgagcaga aattgagtta taatccataa   480

<210> 354
<211> 609
<212> DNA
<213> B.fragilis

<400> 354
agcagaaagt ttatgtacca atttattgaa acgatacgta tagagagagg agtagtgtat   60
aatttggatt atcacacaga gcgaatgaac cagacgcgtg ctgttttttg gccagacgaa   120
ccgccattaa atctatcgga aagcctgcaa ccaataatga atgtagaaat gataaagtgt   180
agagtagtct atagtcgatg gatagaagag atcctataca caccttatca aatacgccca   240
gtacattctt tacagattgt tcattcggat aatatcgatt acacttacaa aagtacagat   300
cggagtgcaa taaatgaact ttatatgcat aaacgggaac aagatgaaat attaattact   360
agaaatggcc tgttgacaga tacatctata gctaatattg ctctctttaa cggaaaagag   420
tggcacactc ccaaacaccc tctccttaaa ggtgtccaaa gagcggcatt gattgacaaa   480
catctaatca gagaaaaaga aataaccgta gaccaattgt ttaactattc ccagatttgt   540
ttattcaatg caatgattga ttttggtaag ataaagattg atgtcaatag agagctaata   600

```
cggatataa                                                                 609

<210> 355
<211> 1260
<212> DNA
<213> B.fragilis

<400> 355
acgatgaagt tttccgaatt acaattaaat gacaatgtac ttgaagcact cgacgctatg    60
cgttttgagg aatgtactcc tatacaagaa caagcgatcc cagtaatact cgaaggtaga   120
gacttaatcg ctgtagcgca gacaggaacc ggtaagacgg ctgccttttt gttgcctata   180
ttgaataaat tgtcggaagg tggacatccg gaagatgcca tcaactgtgt gattatgtca   240
cctacccgtg aactggccca acaaatagat caacaaatgg agggcttctc ttattttatg   300
cctgtttcaa gtgtggctgt ttacggagga aatgacggaa tacttttttga gcagcagaaa   360
aaaggcttga tgcttggtgc cgatgtggtt atagctacac cgggacgcct gattgcacat   420
ctgagtctgg gatacgttga tttatcccgg gtttcttatt ttattcttga tgaagcagac   480
cgtatgcttg atatgggggtt ctacgaggat attatgcaga tcgtaaaata tttgccaaaa   540
gaacgccaga cgattatgtt ttccgctacc atgccagcta agattcagca attggccaat   600
actatcctga ataaccctgc tgaagtcaaa ctggccgtat cgaaacctgc tgaaaaaatt   660
gttcaggctg cttatgtctg ttacgaaaat cagaaattgg gtattgtaag aagcttgttt   720
gcggaagagg tgcccgaaag agttatcatt tttgcatctt caaagataaa agtaaaagaa   780
gtggcaaagg cgctgaaaat gatgaagttg aatgttggag aaatgcattc tgatcttgag   840
caggtacagc gtgaatttat tatgcatgaa ttcaaatcgg gacgtatcaa tattttggtc   900
gctacagaca ttgtatccag agggatagat attgatgata tccggttggt gattaatttc   960
gatgttccac atgacagtga agattatgtt caccgcatcg gacgtactgc acgtgcgaac  1020
aatgatggag ttgccctcac gtttgtgaat gagaaagaac aaactaattt taagaatatc  1080
gagaatttcc tcgaaaaaga aatttataag ataccggtac cggctgaatt gggggaagct  1140
cctcaatata atcctcgttc gtatactaac gcaggaagag gaggaagaaa cttccggaac  1200
ggaaatagaa aaaataataa cggtggacgt tctacggcac ccagatcggg cagaagataa  1260

<210> 356
<211> 471
<212> DNA
<213> B.fragilis

<400> 356
atgataacta ccaaaatcga agttcccccg catctatgtg agtatatccg cggcaaatac    60
tgtaacctga cctctgatcc ggtccgtttc cccgataacc tgaatatcta tcacgtgata   120
ttcgaccttc tccagaagag accgtcggaa gctccggttg atcgtggtaa tttagaaatc   180
tgtctgcctg aacgaagtat aggcaaatcc ccagtgacct acaactattt agggcttcgc   240
tcccaggtaa tcatttcccg gaaaatagaa ttgatgatgt gggcggagtt gcatgaatac   300
ctggacgaac agaagcaccg gtacggaatc aaatacattg atggagtgca attcttcatg   360
cgcagatatg gaattgattc tcttacggaa gaagcttttc tcaaacacta ccagcgttgg   420
agggcaaaag tgaggagaaa agaaaaaagg agctataaaa agcgagaata a             471

<210> 357
<211> 312
<212> DNA
<213> B.fragilis

<400> 357
gaggatgata ctggcgataa tggatatact tttaccagtt gcattcctac ttcttcttac    60
aatagcggtc tcgacagtga caaaacctat aataatacaa aagtctatca tagttcttct   120
cttattcagg taataaaatc cgaattaact cacgaagctg cattgctgca cgttcttttt   180
ctatcggtga tgtgccttcg gataatagga tatcgacgag ggttaatgct ttcttcttat   240
tcatggcatt ctcctttctt ttctttctca atttggttaa taagattacg tatagcgatt   300
aatctgtcat ag                                                        312

<210> 358
```

<211> 312
<212> DNA
<213> B.fragilis

<400> 358
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gcaggatgta catcactctt ggctaataaa acgaaagccc agatccaggc aatcaacgat      60
atagtgatag ctattgtttt taatatacgc tcttggccct tggtaaacgc tccttcagga     120
ataccgttac caatcatttt tgagttggca ggaatcaatg aaaaacgggt agaagatgtt     180
gctgcggttg ctatacaagt agttatcagt cccactccgg caactacatg tccagctacg     240
aaagaggagg tagaggtaga tcgggtaaac atgcaaattc cgccaataat tgtgacaaca     300
gcagccagat aa                                                          312
```

<210> 359
<211> 1143
<212> DNA
<213> B.fragilis

<400> 359
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ttacaatgca ctatgagttt aacagcaaac atatatccgt ctacaatcgc tttagccgga      60
aatcccatca agctgaccat aaactccagt tcagtagtca gctacactat tcgtcaggcc     120
gaccgcacca tcttttccgg aagtggtgaa ggtgagttct ctgttttttct tcaggatatc     180
ctttcaggta ttctcagtcc caaacatctg ctcaatgaat ccactgatat attactgctc     240
gattctactt cagctacaga tattgccatt agtgtccaaa acacccaggg agagactaaa     300
actctttctc tgaaagcagt tataggaggc atcagcaagc ggctattacg gcgtctgtta     360
gatgaaaata gcaatatatt cacttggaag ctgttcaatt catcggtcaa tttcttcaag     420
accacccgta ccaacgggcg tatcatcacc atccgcgaaa ctgaactcct acctattcct     480
ttcctttatc cggatggtgc attaaaagtc gttgcagccg gcattgaaac ctctttatcc     540
ggaacagccg gacaaccggt agcccttaac ctatatcggc tccggaaaaa actgtttcaa     600
actaatcaaa agttagcttc tgtttтcgat atctattccg gatcaaccaa aagttgtact     660
attgtcatca ctcccggaac agtatcccgt gagcgttatt tacttgaatt tctcaactcc     720
tatggagcct atgaacgcat tgaagtcacc ggtatcggta acatcgagtc tgaaattgag     780
tccgactcca cttatcagat ttacgatgaa agcattgatg attatatcga ggcccgcgag     840
cgacagtctg cccgtgacaa gcttctggtc gaatcaggat atcgcaatac cgaagaactt     900
gtgcatttaa tggatatgct tgcttccgat gacataaaga tactcggact ttccggacga     960
aacatcaggg taaatgccgt agctgacaac ctcacccatg ccatacgctc cactgtacca    1020
gaaagcatta aaatgactct tcatttcgtt gactccgatg ttcgctacac cggatcactt    1080
tcagaggacg aaataggaaa tccccgtata cataccgaac agttcacacc tcaatttaat    1140
tga                                                                   1143
```

<210> 360
<211> 969
<212> DNA
<213> B.fragilis

<400> 360
```
aaatacaggt ttaacctcag aaacagaaga aaaatgaatg ctatcatccc tgacatcgac      60
acactcaaga aagtagtcaa aatcaatgct acactgcctg acgaagccat caatccgtat     120
attgatgatg ctatggatat ctatctgacg ccatacatcg gtattaaaac cgtagaaaag     180
gcactgaccg gaactgataa aaggctgaat gataaaattc tccgcaccct ggggcctctc     240
accctaatgc ttgccactcc ggaacttggc atacgtatcg gagacagtgg aattacggtc     300
gaaaacaaac aaggtaccta ctcgccggcc aatgaagcaa aaattgccgc cgctaaagaa     360
agcttctatt ttcgtggcat gcaggccctt gatcggctgc tcacttttct gaccgatcat     420
ccggaaactt accccgaata cgccgagcac tgcaaacaag ccacagattc ttcatgcttc     480
atccgtgatg ccagagaatt tcaagatacc ggtttagtca atatcgagta ttctaccgta     540
tcgttccgta tgatgctacc tactgtccgg cagttgcaag aacgcaatgt gcgtgaaatg     600
ctcaaagaag acctatacca acgtctgctt gatgcccata ccgcagggaa agaactgaca     660
ccaaaagaaa aggtactgct ggggcacata ctccgttacc tcgctaacaa aaccgctgaa     720
ctctatacat cacagacctc acgtgaacag cgtaccatca acgacacacc ggagtttact     780
cccattatcc ggcccatcta ccaggatcag gcagcaaccg gtaatttctt cgctgatcaa     840
```

```
gcgacctact acgccggaaa gatacaaaac ttcatttccg aaaatgctga ggagttagga    900
gtcacaccaa ccgttaccgc tataaacttt aactccaaag aaaagcgaat attcacctct    960
atatcataa                                                            969
```

<210> 361
<211> 789
<212> DNA
<213> B.fragilis

<400> 361
```
aacatgataa cctgggataa cttctatttg ttcgcagtcg cttcaatctg tctttggttg     60
acaggagcta tatttgcact tcgttcgtca gtacgaagta gaatggccgt tgtgctcact    120
atagcaggca tcacctgctt gggaatattc attgccgggc tgtggatatc tctgcaacgt    180
cccccactcc gtactatggg cgagaccgt ttatggtact cttctctttat gggtattgcc    240
gggttattga cttatattcg ttggaaatat cgatggatac tttctttctc caccttattg    300
tccactgtct ttgtaataat caatctgctg aaaccggaga tacatgacca gtcgcttatg    360
ccggctttgc aaagtatttg gtttattccc catgtcaccg tctatatgtt ctcctattcc    420
gtattgggat gtgctttcat catagccctc tgcggtcttg tccatcacaa agaagagtac    480
ctggtgacag cagacaatct ggtctattcc ggagtggcgt ttttgtcaat cggaatgctt    540
ctcgggtctt tgtgggctaa ggaggcatgg ggtaattatt ggagttggga ccccaaagaa    600
acctgggcgg tagtaacctg gatgggatac ctattatata tacatctgcg cttgcgaagg    660
aagtttcgca aaaagatgct gtacgtcata ctgattttct cctttctggc attgcagatg    720
tgctggtatg gagtgaatta tttgccttcg gctcaacaaa gtgtacattt atacaatcgt    780
aataattaa                                                            789
```

<210> 362
<211> 3750
<212> DNA
<213> B.fragilis

<400> 362
```
ataaacgaaa cagtctctaa tatggcaaac gacctaaacc gcagtattaa actttatatt     60
gatggctcag aagccactaa taaaatagac ctggtaaaag aaagtatttc tcgtcttgaa    120
gataaactca ggtcacttac cggaaaagaa gtagattatg caaaacgctc ccaggatctc    180
aaaaaagaac tggatgcaaa aaaccgaact cttcagaatt acgagaaaca gttagccgaa    240
acagaacggg ttctcaaaag cctctccgga gcaacttaca acgaactcct tgctgtccag    300
tcccgcgttc ggaaagagct tcgtaatgca gtgcccggaa cgaaacaata tactgctgct    360
cttgagcaga tcggcgtgt cactgaagcc ctttccagag cacaggccaa catgcgcgtc    420
gaggtaggtg cacaaggtaa tatctggtca cgtgcctccg gattcattaa caaatatatt    480
ggtctgatcg gtactgtcat agcagctatc accggagttt caatgaaact caaccaactc    540
cgagaacagc gaaacaaacg cgaggaagcc aaggccgatg ttgaagctct taccggactt    600
tccaaggacg atataaactg gttggaacag caagctgtcc agttgtcaac gacaatgacc    660
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gaagcaaact tggctcaact gatcaaagag ttacatgcac tgattgagaa acttaaatac    3660
ctcaaagcat acgtcgtgct tcgcgagctc aacgaagcac aagaattagc agataaatca    3720
aaggaaccat tcacccgcaa aaaacaataa                                      3750
```

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<210> 363
<211> 462
<212> DNA
<213> B.fragilis
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gacagtgagg tccatgaaga taaggacgct gccaaagcca tcctgtctgc caaaaggaag    180
gagtaccggg atgcagccaa gaaacgggag gagaaaagaa aaaaaaatgc tgcataccga    240
gagaaaatga aacccggtg gcaatggtta caggagggaa gaatacctaa cgataatgcc    300
agatggaaag ttggagagga gctgaataag acattttgta catgtgctta cggaagtaac    360
tattgttatt gccatgagag atatacccat gaacctaaaa atgatgaaga gatgcaaaaa    420
gctattttg attttcataa gaacggaaat agctgggtat ga                        462
```

```
<210> 364
<211> 1098
<212> DNA
<213> B.fragilis
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cgacttatga caaagctaat cagaacattt catcctgtag gacatggagc ttttttatacc    60
gaaaagcatg ttttagaaga tcagactata aatattgtgt atgactgtgg ctctaaaact    120
```

```
ttggaaaaac aattaccaag tataattaat aatactttta agaaaggaga agagatcgaa        180
tttttattta tctcccattt tgatgcagat catgtcaacg gaatagagta cttgaaaacg        240
tactgtaaaa ttaagaaggt tgtcattcct ttaattgaag ataaagacgc tatcttaatt        300
atcaaagcaa ttaatacatc taaaatagga agtaataaac tggatacttt aatagatagt        360
cctgaagagt attttcccgg atctgagatt ataaaagtta aggctgtaaa cgaaggttat        420
gatgatgatc gatattttgc taatgatttg aacaatgggg gaacaatacc aagtggaagt        480
gaaattatat tacataaatc aagcgctgaa aataaatggt gctttatccc attcaactac        540
aattacactg aaagagtaaa tctatttaaa gataaaatca aagaaaaagg attgattttc        600
aataaattaa ataatattga ttatgttcaa atatcacaga aaaccataaa gtctatatat        660
aaagcaataa aagggaaagc caatgggaac tctttagttg tattttctgg aggagattat        720
gcaatttctg caacgcatta tttttctact gacaaaaaaa tagtattaga atatgataga        780
tgcagctata taagctgcat ctatttagga gattcttttg ctaacaagtc ggactttat         840
agtcaattaa aaggaagatt ggataagttg accgaaagta ttggtataat acaaatagct        900
catcacggag ccaagggaaa ttttctcct aatatcttaa agttaggaac taatcctttg        960
gctataatat cctgtaaatc aacagacaag catcacccat ctgttaatgt cgtaaaacag       1020
atacaggaaa atggttcaat accattcata gttacagaaa aaccaactac agaagtagaa       1080
cagataggat actactaa                                                     1098
```

```
<210> 365
<211> 351
<212> DNA
<213> B.fragilis
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<400> 365
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ctgttgtttc taaatttatt tatcaatttt tatttttttt attttatgaa catgtacatt        120
ggaaacctta gctatcgtgt taaggaagca gatttgagac aagtaatgga agagtacgga        180
acagttgatt cagtaaaact gatcatcgat cgcgagactc gcaaatcaaa aggattcgca        240
ttcgttgaaa tgccgaacga cgatgaagca aaaaatgtga tctctgagtt gaacggagct        300
gaatacgaag gccgtcagat ggttgttaaa gaagctctgc ctcgtaacta a                 351
```

```
<210> 366
<211> 1299
<212> DNA
<213> B.fragilis
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<400> 366
aaaaacattg caaaggtaag ctttatcttt ataaccggac agctttcata taattttata         60
cctttgcatt tcataacaac tatcaagagt atgcgtaaat ttattatttc tttctgctgc        120
tatgtcttct ttattttac tttggcagcg caggacaagg ctccgcatta caccgtaatt         180
gtttcattgg atgccttccg ctgggattat ccggcaatgt atgataccc taacctgaac         240
cagatggccc gcgagggagt aaaggcgact atgcttccct cctatccggc gtctactttc        300
cccaaccact atacattggc tacgggattg gtgcctgacc acaacggtat tatcaacaac        360
actttctggg atgtaaaacg tcgtcgccaa tactctatgg gagatcccgc cacgcgaaac        420
aatcccgact actatctggg tgaaccgatc tggattacgg cacaaaagca gggagtgaag        480
acaggaaacg tttattgggt tggttcggat attgccatca aaggcggtta tcctacttac        540
taccgggaat atgccgagaa gcctcgtctt acttttgaac agcgggtgga ttcgaccatc        600
gctcttctgg aaaagccgga agcggaacgt ccccgtctcg ttatgcttta ctttgaagag        660
ccggatggcg tgacccatca tcatggcccc cgcagtgtag aagctgctgc cattatacac        720
cgtatggata gtttagtcgg aatgttgcgg cagggaattg catcgcttcc tttcggtaag        780
gatgtcaacc tgattgtcac cgccgatcat ggaatgaccg agatcagtga cgaccgcgtg        840
gtagacatga ataagtatct gcgtccggaa tggtgtgagg ctgtggatgg acggactccg        900
acctctatct tcacaaaacc ggaatatcgc gactcggtat acaatgcctt gaaagatgta        960
ccccatattc atgtgtggaa aaaggaggag attcctgtcg aattaaacta tggaagcagt       1020
gaccgtatcg gtgatattgt agtggctccc gagttaggat ggcaatttac cgatgtacca       1080
cgtgccttga aaggtgctca tggatatttt ccgcaaagtc cggatatgca ggtaatgttt       1140
cgtgcctgtg ggcccgactt taaggcaggg tatgaatcga agggatttgt caatgtggat       1200
atctacccgc tgttggccca tttattgaaa attactccgg agaagacaga tggacagttc       1260
gaaagaataa aagacattct gaaagatgtg tctttttga                              1299
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<210> 367
<211> 969
<212> DNA
<213> B.fragilis

<400> 367
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tatgggaact atctttccca ggcaccggag aatcctcaca ttttcgatcc ccactttaca   180
caattagtca atatactgac taaaatagcc agggaaataa aagatgctcc ttctgtttac   240
ccggctgcat tcgaagagat cctgatcgtt caaacactga atgatgaaca acggactcaa   300
gaaaccgata tccggacaga ggcaatcgac cgactccaag aggagatcga cggactgcat   360
aaccgtatca gcgaacttga gagtgacacg gaaaatcatg ctgacgaact ctcagcttta   420
aatgaagagt tcgaggagaa aatgaaagag ctctccgcta tccggggcga actggatgcc   480
ttgaacactc cgggcgtcaa gatcgtaaca gaagaatccc tcactcctgc cttacgtaaa   540
gcatacgccc gtatcaaaga gatcgctccc ctgtacgcca gtctccataa tgatattgcg   600
aatccggata tcccggcaga ggaacgtcac cccctcgcag aagaactctg caagctggac   660
gacgaacgtc gcaaactttg gaaacagatt gacgattacg cagaaggcaa acaggcaacc   720
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agggccggga aagagggaaa acaggctgtt ctacagaacg cactcgaccg gattgccaaa   900
tacgaaactg aattagccgc tttaacggca gaattatcgg cagaacaagg tgaaaaggtt   960
tcaggataa   969

<210> 368
<211> 192
<212> DNA
<213> B.fragilis

<400> 368
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tttgtttttt ggggtcgttc cccctttacc ccctttttgct tagaagaacg ttttgaacaa   120
ctgtacctga gacgaagtaa agccggcaac aaggtgtcta tatattattt ttattttttc   180
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<210> 369
<211> 1725
<212> DNA
<213> B.fragilis

<400> 369
ggaatgacag cccaagcctc tcccatacca tcggcgtacg aactccggat gaaacaggcc   60
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gacgaatata tcgttgcatc gcgtggtacc ggtaagtcag aaggtatcga cgcccgcttc   180
attctcagaa acgtctggga aatgcccggt tcattgggtg gaatgatctc tcccagctat   240
gctaaagcct gggggaatac ccttccggct atctgtaaag cactcgccga atggggatac   300
attcaaaata tccattatgt cgttggccat aaagcaccac cttccatggg cttttgccaag   ·360
cctgttcgtc cggtactcgg agacggatgg agtaatgctt ccatttctg gaatggcacg   420
gtcatggtca ttctttcctt taatcaaggg atgtccgcaa actccatgtc gcttgactgg   480
gtgataggtc cggaggcaaa gttcctttcc tatgacaaga taaagaacga ggtcaatccg   540
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tcaacggaca tgcccggatc atccatggga cgttggattc tcgacaaaca ggaagagatg   660
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cagatgcagc gtgattctcc cccgttggta tggcgtaccg ccttcctgaa cgaacggctg   960
atgaaagttc ccaacggctt ttatagtgcc ctggacgacc gcatacattt ctatcagccg   1020

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gctgataacg gaaggctgaa gaatcttgga agtaattgga agcaactgag ttcctgcggc    1080
tgcctgggag acggtgacct tgattttgac aaagaactgc atattgcatt cgactccaat    1140
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ccgggaaccg gcaccggagg aatatttttc ctcaatcgga aataa              1725
```

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<210> 370
<211> 3057
<212> DNA
<213> B.fragilis
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<400> 370
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tgtccccggt gcaaagccgc aaagaaactc tcaattagtc cggccaaaca aatctttaaa     180
tgctttggat gcaatgaatt gaaaggtgga gattcggttt ctttcttaat gtccgctgaa     240
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caacgtccgg ccatcaagaa acaaccggca aaaaagatga aaaaaagcag caaggctgcc     360
aaaggtatcg atgtcgacag ttattgtgcc aggatgttgg ctgaatcagg tcttaccttt     420
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cctcacaaat atgacagtat aaccgggaaa ccttttcaag tcgataagga cgggaaggcg      2940
gttgtagatg ataaatccgg aggtgtagag tactttacgg taggaaccgg agcccaacct      3000
atcccgaaag aagataatag ccggttacca caaccgacag gtaaactcgt tttctaa        3057
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<210> 371
<211> 840
<212> DNA
<213> B.fragilis

<400> 371
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gatgcgggta ttggaattcg taccattaaa aaatcactga aggacataaa tgtgactatg      180
gactcaatac gtgcagtatt tattactcac gatcatgccg atcatattaa agctgtagga      240
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aataaaagct attgtatgac agaaaagttg catggttctg tacgctattt ggaaaaagaa      360
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gctaattatg atgaagaaat gcttcgtatg ggaccttatc cgacatatct gaaagagcgt      600
atctcaagta aaacaggtca tatgagtaat atagataccg ccaactttct tgcggaaaac      660
ataatggagc atcttcgtta tatttggctt tgccatctga gtaaagataa taatcatccg      720
gagttagcat ataagacagt tgagtggaaa ttgaagagta aaggtattat tgtcgggaaa      780
gatgtgcaac tacttgcttt aaagagaaat acgccttcgg agctctatga gtttgaataa      840
```

<210> 372
<211> 342
<212> DNA
<213> B.fragilis

<400> 372
```
tgtaaggagg catatcaatg taaaatcatt gaagccgggt tcgattcccg gaagcccaca       60
ctaattttga tcattatgaa aacagtacat tcatcaccaa gcctgtctcc aagtggaaca      120
aagagacaga aagctaatct atttacaaac gaaaatccgg aaactatcgc acaaatgcgc      180
atgcagtctg cacaaaaaga gcagcataag gtcatggttc gtcttgataa ccgcacacat      240
gtacttgttg ctccgcaaaa tgtaactcct gagtatatag aaatgctgcg aaaaaaatat      300
caaattacct acaatgctcc agctcgagga ggaaggaggt aa                         342
```

<210> 373
<211> 222
<212> DNA
<213> B.fragilis

<400> 373
```
ataagacatt ttgtacatgt gcttacggaa gtaactattg ttattgccat gagagatata       60
cccatgaacc taaaaatgat gaagagatgc aaaaagctat ttttgatttt cataagaacg      120
gaaatagctg ggtatgacta taaacaagat cagaaaggat ctaatatgaa attaagaaaa      180
aaggaactaa agtatggaat cagaaactat aaaaacaggt aa                         222
```

<210> 374
<211> 1080
```

<212> DNA
<213> B.fragilis

<400> 374

```
tcagttaatt ttgcacacat gattgaattg gcacagcata ttgaagtatt attattagag      60
aatgattgtg tgatcgttcc cggttttggt ggatttatag ctcactacgc tcctgctatg     120
agagtggctg aagagaattt attcctccct cctacccgta ctattggttt caatcctcaa     180
ttgacgttga atgatggtgt cttagtacaa tcttatatgg ctgtgtacga tactaacttc     240
tcggatgcta cgaaaatggt agaaaaagag gtggcagaac ttatctccgc tctgcatgag     300
gatggaaaaa ctgatcttcc taatattgga gaaatccgct ataccattca taatacttac     360
gagtttgttc cttacgacaa taaaattacc actccttacc tctatgggct cgactcgttt     420
gagatgaagg agttgtcggc tttgcgacgt ccggagaaag aacaaattct tccgactgtt     480
cttaagaaaa agacaagtta tgaattcaga gcgaactggg ccttttttgag aaatgccgta     540
gctatgattg cagcggttgc attgtttttc tttatgtcaa caccggtaga gaatacatat     600
attgaaaaag gaaattatgc ccggctactt ccaactgatt tgtttgaaaa gatagagaaa     660
caatcggtgg caatgactcc ggttatgcta aaatcagttg atgccatccc acaaaccaaa     720
ccggcaactg cgaagaaaaa gtcgtccact gttcgtaaag catctgtagt aaagccggtt     780
gcggtaaaag aagtgaaagt taaccaaccg gaaaagacaa tgaaagcaac cgaaactaag     840
gttgtggaaa aaactttttcc atatcatata attattgcca gcgtagctaa tacgaaagat     900
gcggaggcga tggcaggtga acttaaagcc aagggatata caggtgccag agtattgacg     960
ggtgacggta agattcgcgt gagtattatg tcatgtgccg atcgtgaaga tgccaaccgt    1020
caattgttga aattaagaga gaacgaggct tataagaacg cctggatgtt agctaaataa    1080
```

<210> 375
<211> 2025
<212> DNA
<213> B.fragilis

<400> 375

```
tacatccttt ttatggaaaa gactcttaat cttattaaaa atgatccttg gctggaacct      60
tacaaagacg ctatcgttgg acgttttgaa catgccatgg ataagaaggc cgaattgacc     120
aatgggggaa aatctacgtt atcggacttc gcttccggat atctttattt cggttttgcat     180
cacactgata aaggatggat attccgtgag tgggcaccga atgcatcaca tatttatatg     240
gtgggtacat tcagtaattg ggaagaaaag cctgcttata aactaaaacg cctgaaaaat     300
ggtagttggg aaatcaaatt accgatcgac gctatacaac atggtgactt atataaatta     360
cacgtctact gggaaggcgg acagggagaa cgaatccctg cttgggccaa tcgggtagta     420
caagatgaca atacaaaaat attcagtgct caggtatggg caccggaaaa gccatttaaa     480
tttaaaaaga aacttttaa gcctagtaca gatccactgc taatctatga atgtcatatc     540
ggtatggcac agcaggaaga aaaagtcgga acttataacg agtttcgtga aaaaattctg     600
ccgcgtattg ccaaagaggg atataattgc attcagatta tggctataca ggagcaccca     660
tattatggta gtttttggcta tcatgtatcg agtttttttg ctgcatcgtc cgttttttgga     720
actccagaag agcttaagca gctgattgat accgcacacg gattgggtat tgctgtcatt     780
atggatatcg ttcactcaca tgcagtgaag aatgaagtag aagggttagg aaactttgca     840
ggtgatccaa atcaatattt ctatccaggc ggacgaagag aacatccggc atgggattca     900
ctttgttttg actatggtaa aaatgaagtg atgcattttt tactttccaa ttgtaaatat     960
tggttggaag aatatcattt tgatggcttc cgttttgacg gggtgacatc catgctttat    1020
tatagccacg gattgggaga agcattttgc aattacggcg actactttaa tggacatcaa    1080
gatgataatg ccatctgcta tctgacattg gcaaacgaat tgattcatga agtaaatcct    1140
aaggctatta ccattgcaga gagaggtttcg ggtatgccag gacttgccgc caaggtggaa    1200
gatggaggat atggatttga ttatcgtatg gctatgaata tccccgatta ttggatcaag    1260
acaattaaag agaagataga tgaagattgg aaaccatcca gcatgttttg ggaagtaact    1320
aaccgtcggc aagacgaaaa aacaatttcg tacgctgaaa gtcatgatca ggcattggta    1380
ggagataaaa cgattatttt ccgcttgatt gatgcagata tgtattggca tatgcagaaa    1440
ggtgatgaaa attatatagt tcatcggggc gttgctcttc acaaaatgat tcgtttacta    1500
actgcaagca ccattaacgg tggatatctg aactttatgg gaaatgaatt cggacatccg    1560
gaatggatcg attttccgag ggaaggtaat ggatggtcat gtaagtatgc tcgccgccaa    1620
tgggatttag tcgataataa aaacttgact tatcattatc tgggtgattt tgatgcagat    1680
atgttgaaag taattaagag cgtaaaaaac atccagcaaa cccctgtaca agaaatatgg    1740
cacaacgatg gcgaccaagt gttagcgtac caacgtaaag atcttgtttt tgtattcaat    1800
```

```
tttaatccga gtcaatcatt caccgattat ggctttttag taacaccggg aacttatgag   1860
gtggtactga atacagataa cataatttat ggaggaaacg gcttgtcaga tgatagtgtg   1920
aagcatttca cattgcccga tcctttgtat aagaaagaaa agaaagaatg gttgaaactc   1980
tatattcctg cacgtacagc aatggtattg agaagaacca aataa               2025
```

<210> 376
<211> 1146
<212> DNA
<213> B.fragilis

<400> 376

```
cgaatgaatt tatatttaaa acacaccttta ttttatctat taggtatatc ttacgctttg   60
atatcttcag cacagtctaa tccggataaa ctacaatgta aagtgacagg acgcatgctt   120
ctggatggcg gtgtttatct caaaaatgat aataattttg gtaatggagt tgaattcagt   180
gatcttcgga taggtgcaaa agtcgcatat caaaattggg atatgaaact tgaaataggc   240
tataccggca ataaagcgac aataaaagat gcttttgcaa agtacacata caagaaccac   300
tctatacaag tcggacaatt ctacgaaccg tttagtttag aaatgatgtg cagcactttc   360
gacattcgct ttaatcaatc tccaggagct gttcttgcat taacaaacgg caggcgaatg   420
ggaatcactt atggttaccg aaacaaacgt cattatatgt caggagggc attcatggat   480
aatgaagtca acaacctaaa aaaagcgtca catggatatg ctttggatgg cagggtagta   540
tatcgtccgg ttttagatag caagaaactt attcatatag gttttgcggc caattaccgc   600
accccctaacg aatccttaaa tgaagaagat aaaaacatat ttatctataa atctcctggt   660
gtgagtacga ttgataaccg aaatattgca atggctacta ttgatcatgt agcgtatcag   720
ataaaatttg gcacagaatt actggtttat tatcaccgtt tctgcctgca aagtgaatat   780
atacgtactc atgtggaacg agacaatgct tttaagaact atgtggcaca aggagcctac   840
cttcagtgct cttggctttt atccggagaa acttatctgt acgatgaatc tgttgcatgt   900
gccggtcgtc cggaaggaaa aagtctggag gtttgttcac gatttaacta tttaacactc   960
aacgatgagg atgcctccat ttggggagga gaacaaaaag atatctccat cggactcaac   1020
tattatatta ataaatatat aggtataaaa ttaaactata gctatctgat gcccggagcc   1080
agtataaaag agatcagccg caaaaacttt agtgtttttc aaggacgatt tcaattcatt   1140
ttttaa                                                            1146
```

<210> 377
<211> 516
<212> DNA
<213> B.fragilis

<400> 377

```
cggcagaatt atcggcagaa caaggtgaaa aggtttcagg ataacttttcc tttggctttg   60
tgtcccggtt ctatcgaacc gttcatgcac aaaggagact gggcaataca tgaagtgttg   120
ccctctcttt tatctgaaat cggaccggcg gatataagga tcgctacatt cagtatctca   180
gaggacagtt tacgccctct cttcttcctg gccgatgata aaaaaattac aggtctgacc   240
ctcctgctcg atacgacggt aaaacggcac aagcttgact tgttactgtt tgcctccaac   300
atcacaccac gcatacggat tgactcctgt catgcaaaag tgttattggt ggaaaatgac   360
aaatatcagt tcggtattgc cggttccgcg aacctaaacc agaatcaccg ctgggaaaat   420
ggattctatt tcacttccgg aaagcatttc aattacttct tggaaatgtt cgagcaggca   480
tataatcaag caatcagtta cgaaatatta gaatag                            516
```

<210> 378
<211> 582
<212> DNA
<213> B.fragilis

<400> 378

```
gaaattgatt attattgggg gcaattaata agtcctggcc cacaggcgaa tgatatgaga   60
atacaatttg aaattaaaga aaaattacct gatattatcg gggaaattct gaattccgaa   120
aaatggatga cccttattaa ggaagatatt tcgggtagga aattggttgt aatccgtgat   180
caggcattcg attcggaggc aactgtggag atttactctc gcgaagtgac tattaagaca   240
gcatggtcca gatacactta tcggctgttt gttttaggag actgtgtatg gtgtgagtat   300
```

```
aatggtgctt atcgtggatt attagagcaa aaactgttgc catctatcac ccctaaagag    360
agtctgttgg attcggaagt tctggacagc tcattgtatg ggcatgaaaa gaagaaactt    420
cggaatatg ctgaagataa tcttaaactg aagaaattca gacgtgagaa ttttaatgaa    480
aatcgtacgg gggtagctcc ttttgatcat ccaaagaaag tatatgatga attcattaag    540
gaagactaca ttgctccttc ctcgaaggag aataataaat ag                       582
```

```
<210> 379
<211> 1227
<212> DNA
<213> B.fragilis
```

```
<400> 379
ggtatagatt atatggtaca aagtcagact cagccgattc gtagaattgc atttcctata     60
ttaattgcat taagtgtatc tcactgttta aatgatcttt tgcaatctgt catttcggct    120
gtatatcctc tttttaaaga agatctttcg ttaagtttcg ctcagattgg attgataacc    180
ctagtttacc agatgtcagc ttctgtattt caaccactga ccggccttat ttttgataaa    240
cgtcctatag cttggtcgct tcctatcgga atgagtttca ctttgatagg tatgctgaat    300
ctggcttttg catccaatct gaattggctg cttgcttctg tctttatcat tggaataggt    360
tcgtctgttc tccatccgga agcatcccgt atcacctttt tggcttcggg agggaaaagg    420
ggattggcac aatcactttt tcaggtaggt ggaaatctgg ggggatcgtt aggccctttta   480
ttagtcgcat tattagtggc tccttatggc aggcatcata ttgcactatt tgctatcctt    540
gctttggcgg ctatttgtgt aatgtttcct atttgccgct ggtaccgttc ttatctgaac    600
catcttaaaa aacgtccgat ccatgcaaaa gcatatatcg agcgcccgct tcctcctcaa    660
aagactgtat ttgctatcac gatactgatg attcttatat tctctaaata tatttatatg    720
gcaagtctga acagctatta tacatttttat ctgatccata agtttaatgt aagcattcag    780
cagtcgcaac tcttttttatt tgtatttctg gtagccactg ccattggtac attgatggga    840
ggccccattg gagacaagat aggccgtaaa tatgttattt gggggtcgat cctgggaaca    900
gctccttttta gtttattgat gccacatgcc ggactcgtat ggactataat tcttagtttc    960
tgtgtcggct taatgctttc gtctgctttt ccagctattc tgttatatgc acaagagctg   1020
cttcccaaca agttaggact gatttccgga ctttttttcg gttttgcatt tggagtggca   1080
ggcattgcat ctgctgttct tggcaatatg gccgataagt ttgggattga tgctgtatat   1140
aatgtttgtg catttatgcc gttgttagga ttggtgacct ggttttttacc ggatctgaag   1200
aaagtgagaa gtgaaaaaca agaataa                                       1227
```

```
<210> 380
<211> 195
<212> DNA
<213> B.fragilis
```

```
<400> 380
gataccattc tgtatggacg agatggcact agtaaaggag aactgctcat tgacataaaa     60
ctgtgcaata tggtgaaaga gtttacacct gacatggcaa acagcatgca aaagattgtt    120
cggaaatgtt tccctagaac cctgcagata gtgaacaaga ttcatgtatt cacactggtg    180
tacgaagcga tgtga                                                     195
```

```
<210> 381
<211> 2484
<212> DNA
<213> B.fragilis
```

```
<400> 381
actaatttat acgaaatgaa gaaagaaaga tatttaagag agatggatga ccagaatgat     60
aacgcatttt cattaattgc cgattttgac ggaaacgaag atcaagtgtt tgacataaag    120
gttggtgaaa ctcttccggt actcccccctc cgtaatatgg tattgttccc cggagtattt    180
atgcctgttt ctgttggcag aaaatcatct ttgagattgg tgagggaagc cgataagaaa    240
aaatcttata ttgcagtagt ttgccagaaa atggcggaaa cggacgagcc ggcatttgag    300
gacttgcacc cgatcggaac cataggtaag attgtgcgtg tactcgaaat gcccgaccag    360
acaacaacag tcattatcca gggaatgaaa cgcctggagc tgaagaatat cacgggagaca   420
catccgtacc tgaagggtga agtgaacatt gttgaagaag aaatcccttc aaaagatgat    480
```

```
aaggagtttc aggcattggt ggaaacctgc aaggatttga caatacgata tattaaatca    540
tcggacactt tacatcagga atcagcgttt gccatcaaaa acctgacgaa ccacatgttt    600
ctggtggact ttatctgtac gaaccttccg ttgaagaagg acgagaaaat cgaactgttg    660
cgcattgatt cgttgcgtga acgtacctat cggttgcttg aaatcctgaa tcgtgaagtg    720
cagttggccg aaataaaggc atctatccag atgcgtgccc gtgaggatat tgaccaacag    780
caacgtgagt atttcctgca gcagcagatt aaaacgatcc aggacgaact gggtggtagc    840
ggccaggaac aggaaataga agagatgcgc caaaaggcag aacacatgaa gtggagtacc    900
gaagtgcggg aaactttcct gaaagagctt gccaagctgg aacgtaccca tcctcaatcg    960
ccggattaca gtgtgcagtt gaattatctg cagacaatgc tcaatctgcc atggggagtt   1020
tatactaccg acaatttaaa cctaaagaat gccgagaaaa cgctgaataa ggatcattat   1080
ggtctggaga aagtaaagga acgcattctg gaacatttag ccgtacttaa attgaagggt   1140
gacatgaagt ctcctattat ctgtttatac ggtcctccgg gagttggtaa gacttcactg   1200
ggaaaatcga ttgccgcagc cttgaagcgg aaatatatcc gtatgtcatt gggaggtgtg   1260
cacgatgaag cggaaattcg cggacaccgt aaaacttata tcggtgcaat gccgggacgt   1320
attatcaaaa acctgattaa agcgggttct tcgaatccgg tatttattct ggatgaaata   1380
gataaagtga gtgccgaccg tcaggagat ccttcatcgg cttttacttga agtgcttgat   1440
ccggaacaaa atacggcttt ccatgataat ttcctggatg tggattacga cttgtccaaa   1500
gtgatgttta ttgctacggc aaacaacttg aataccattc ccggaccatt actcgatcga   1560
atggaactga ttgaagtgag tggttatatc acggaagaaa aagtggaaat agcacgaaag   1620
catttagtgc cgaaggagtt ggaagcaaac ggaatgaaga agaccgacat taaaattcca   1680
aaagatacgc tggaagctat tatcgaatcg tacacacgtg aaagcggtgt gcgtgagttg   1740
gaaaagaaaa tcggtaagat tcttcgtaaa tcggcccgcc aatatgcaac agatggtttc   1800
ttcttaaaaa cagaaatcaa accgactgat ttgtatgact tcctaggtgc tccggaatat   1860
actcgtgata aatatcaagg caatgattat gccggtgtgg tgacaggatt ggcatggaca   1920
gccgttggag gtgaaatctt atttgttgag accagtctga ccgcggcaa gggcggacgt   1980
ctcacattaa ccggaaattt gggtgaagtg atgaaagagt ctgctatgct ggcacttgag   2040
tatatcaaag cacatgcttc actcttaaat ctggatgaag agatctttga taactggaac   2100
atccatgtcc atgtccccga aggagctat ccgaaagacg gtccgtcggc gggtatcaca   2160
atggctactt cgttggcttc tgctttgaca caacgtaagg tgaaggctaa tctggctatg   2220
accggggaaa tcacgttacg tggcaaggta cttccggtag gtggtattaa ggagaagatt   2280
ctggcagcta agcgtgccgg catcaaagaa attattatga gtgccgagaa caaaaagaat   2340
attgacgaaa tacaggatat atatctgaaa ggactgactt tccattatgt gaatgatgta   2400
aaagaggtct ttgccattgc actgactcaa gagaaggttg ccgatgccat tgatttatcc   2460
gtaaagaaag ccagccagga atga                                          2484
```

<210> 382
<211> 198
<212> DNA
<213> B.fragilis

<400> 382
```
cagattatat acataacact aaatatcgga tgccggttat ttttgttatc caaagatgaa     60
aaacaatcgt taaatattga attatctcgg gaagaaatag aatatttctt taaaccttat    120
cctgcagatg agacggaggc atacgagata tgcaatgatt ttataaagaa aatatcaaca    180
gataaaagta ttctgtaa                                                  198
```

<210> 383
<211> 213
<212> DNA
<213> B.fragilis

<400> 383
```
tatataatat attatcagcg ttttattttg ctttgggagc aggggggtcgt gggttcgaat     60
cccgctaccc cgacaggaaa taagagtaat cacacatgtc aatgtggtta ctcttatttc    120
attttgtgct atggtggaat tccgataata cggaatgatg caactggaac agagcgacgc    180
cttttacatt ttcaaataaa actcccgggt taa                                 213
```

<210> 384
<211> 696

<212> DNA
<213> B.fragilis

<400> 384
aaatatgatt ttacaattaa aagaggaaaa aagatatgga aagaatcatt ggatggtatc 60
agccaaatag atgccttccc tgttttaaaa gcacgacttg gcaaaagtct gccacaattt 120
gtttatactc taagtccgga taaacagact gctactctgc aaataatgaa cttatatcaa 180
ttaccacaac taaaacaatt ttgtgactca gtcttttcgg tgattaacag agaacatgta 240
cccaatttgg ttatagatgt caggaataac aaaggagggt caagtgctgg agttgacatg 300
cttctgtcat acttatcgca tgatgcttat acattatata tcaaaactga tttaaaaatc 360
agttcgtact caaaacggta caatgagcaa aaacatccgg aaacctatga agagatcaaa 420
aatttacctg acggttcttt atttgctatt cgggattctt tcgtagaggg aaaccgggac 480
aaagcagaca tttataaagg atcagttaca gtattggtaa atgaatccac ttattccgga 540
gcctcgacat ttgcatctgc cattaaaaaa tctcatgcag gaaaagttct tggcgaaacc 600
ggctgcccaa ctgtatattt tggcaattac atgtcattca cattacccaa ttcccgatta 660
gaatattata tctcactcaa caaattttat gaataa 696

<210> 385
<211> 552
<212> DNA
<213> B.fragilis

<400> 385
ctaaataaat attttataat gaaaagaatt ctttgtccta aatgtgagaa ctatctttct 60
tttgatgaaa ctaaatatag cgaaggccag tcattggttt ttgtatgtga acactgtggt 120
aagcaattca gtattcgtct ggggaagagt aagatgaagg ctcctcgtaa ggaagagaaa 180
ttggatgaag atgtatataa agaagagttt ggctgtatcg ttgtcattga aaatgtcttc 240
ggtttcaagc aagtcttacc tctgcaagaa ggtgataata tcattggccg ccgttgtgta 300
ggtacagata ttaatactcc gattgaaacc ggtgatatga gtatggacag acgccactgc 360
attattaatg tgaagcgtaa cagacaagga aaattggttt atactcttcg tgatgcccca 420
agcctgaccg gaactttctt gatgaacgag atcttggggg ataaagaccg tattcgcatt 480
gatgacggag ccattattac tattggagcc actactctta tccttcgtgc tgcaaaaaaa 540
gaagaaattt ga 552

<210> 386
<211> 210
<212> DNA
<213> B.fragilis

<400> 386
gaaaggaggt acgaaatggg acgaataaaa gaagaagcct gggtcgaaaa gtgtaccgta 60
cttcatgaag gaaaggccac acccaatatc tattataacg tttttgccga tggtgagcag 120
ctctgcgaaa tctcctatga cagattaatc gctatacgta atcttattaa ccaaattgag 180
aaagaaaaga aaggagaatg ccatgaataa 210

<210> 387
<211> 513
<212> DNA
<213> B.fragilis

<400> 387
cctaatcatc ttatggatat aatcgacaga attaagcaat atcttaatca taaaggaatt 60
agtgattata gatttgagaa aacattatcc ctatcaaaag ggtacataaa taaagctaaa 120
aatccaaccg cggatatatt aatgaagatg tgtggtatat ataccgacat atctactgaa 180
tggctgctta gaggtgaagg tgagatgttg agggagaaaa gagaagacct tggccttcat 240
cgggctgagt cagcatctac agatgaaaac tctttaatct ataagatgta taaagagaaa 300
gacgatgaaa ataaaaccct aatcaagcag aatgccgttt tagaggaacg catccgccaa 360
ctcgaagctg acaatgaatc attaagaagt cagtcaggag ctgataggat aaccgatact 420
ttttccgatc taccattagt agactacgaa gaagattatc cgcccgtaga acgtccttca 480

```
agttccaaac atccgttagc aggaaaagcg tga                                     513
```

```
<210> 388
<211> 579
<212> DNA
<213> B.fragilis
```

```
<400> 388
atctcttttc atatgataga taataatatt ttctcttgtg gtcctttacc atcaaatgat         60
ggatatacat ggacaattgt ttctcgttta ggcgatatgc ttaacgaagc tgaagcccta        120
tttggtgaac gagataaaag atatacaata cttggtattg agttagctaa tataaaacaa        180
ccacaaatat ggtatccaaa cgattgtaat catgtcataa tacaggtcac cgaagattgc        240
agcaacaata tggaaagggc aatatttcag gtggctcatg aagcgataca ttgcttatgt        300
cccaatccaa agaaaaagac tactatttta gaagaaggac tggctaccta tttttctatg        360
tattatacac gtaaacgtaa aatttattac aatattgata atcttcagta tcaaaagcct        420
tatgaatttt gttctaaatt actaaactat gattctgagt tgattaaaaa agcaagaata        480
atagaacctg acatttcttt tatcaacaaa gagatattac taaatatatg tcctaagata        540
gaccatactt tattagatga actaactaaa aaatttttaa                              579
```

```
<210> 389
<211> 333
<212> DNA
<213> B.fragilis
```

```
<400> 389
ttaatatttc atcttgttcc cgtttatgca tataaagttc atttattgca ctccgatctg         60
tactttgta agtgtaatcg atattatccg aatgaacaat ctgtaaagaa tgtactgggc         120
gtatttgata aggtgtgtat aggatctctt ctatccatcg actatagact actctacact        180
ttatcatttc tacattcatt attggttgca ggctttccga tagatttaat ggcggttcgt        240
ctggccaaaa aacagcacgc gtctggttca ttcgctctgt gtgataatcc aaattataca        300
ctactcctct ctctatacgt atcgtttcaa taa                                     333
```

```
<210> 390
<211> 246
<212> DNA
<213> B.fragilis
```

```
<400> 390
tcaaaacatc atatttgcaa catgaatgac gataaaacca tcacagcagc aattgagaca         60
agcaatgtaa ctgcattgct tgccgcttac cggaaattta caagttcctc cggggctaca        120
accgatgaat ttttccgttt catcaccacc cccactccgg aacgggaaga gttcctggca        180
ttgtactgct cttcgacctc ttctgtgtcc ggtaccatta tacaaactaa ttacaatgca        240
ctatga                                                                   246
```

```
<210> 391
<211> 321
<212> DNA
<213> B.fragilis
```

```
<400> 391
tcaagcaatc agttacgaaa tattagaata gaaatggagt tatcagatga aaccttgcaa         60
caaatcagag agatggccgc agctctgctg cctccggcag aaatcgccat tctaatttcg        120
ctgcctgccg gtgaacgcag ctacttctgt gatatttgca gaaatcatca tcattctcct        180
atctacgaag cataccatca gggacgcctg caaacaaaat tcgaactccg aaaaactgtg        240
atcaagttag ccaaggccgg aagtccggcg gccgagccac ttgctgataa atacatgaaa        300
gaacaaatca tcaacgacta a                                                   321
```

```
<210> 392
<211> 201
```

<212> DNA
<213> B.fragilis

<400> 392
ttacatgatc agttctgttt cattgattcg gggtcaaatg aaaccattta caatggattg   60
gcagaggact gtttatggga gatcgtactc ttcagtaacg gattcgttta tcacgctctg   120
cagaagttcc ggatctttat agaggaaaag gactttaacc ataccgtcct ttacaactcc   180
catttccatc tcaatttcta a   201

<210> 393
<211> 1125
<212> DNA
<213> B.fragilis

<400> 393
aaagagtgtc aacaagacta taaatttatg agaagcaatc ggtttattaa acgcctggac   60
ttatatatca tcaagaaatt cttggggacg tatgtatttg ctattgcatt gattatctcc   120
attgcagtag tattcgactt caacgagaag atggataagt ttatggaacg gagtgcgccg   180
tggtcggcaa tcatcttcga ttactacatg aactttattc catatttcgc gaatctgttc   240
agtccgttgt ttgtatttat tgctgtcata ttcttcacct ctaaactggc tgaaaactcc   300
gagattattg caatgttttc taccggtatg agttttaaac gtatgttgcg tccttacatg   360
atatcggccg gtatcattgc gatttctacc tttatattag gatcgtatgt gattccaaga   420
ggcagtgtga ctcgtctgga ctttgaagat aaatacgtga aaaagaaaaa gaccacttat   480
gtacacaata tacagttgga gatagacaca ggcgtgattg cttatattga taactatcag   540
gattacaata agacaggaaa ccgtttttcg ctggataaat tcgtagataa gaaactggta   600
tcccatttga ctgcccgtag cattacttat gatactactg cggttaataa atggaccatt   660
aaggattata tgattcgtaa tctcgacgga ttaaaggaaa ctattgtccg tggagataag   720
atggattcca ttataccgat ggaacctgcc gatttcatga ttatgcgtaa tcaacaggaa   780
atgttgacca gccctcagct tagtgcatat atagataagc agaaacaaag gggtattgcc   840
aatatcaaag agtttgaaat agagtatcat aaacgaatcg ccatgtcatt tgcatcattc   900
atcctgactg tgatcggagt atctctttct tcaagaaaaa caaagggggg aatgggattg   960
catttgggaa taggacttgg actgagcttt tcatatatcc tgttccagac cgtggcatct 1020
acttttgcgg taaatggaaa tatgcctccg atgatcgcca tgtggattcc taatttactg 1080
tatgcgctga ttgcatttta cctatataga aaggctccca aataa   1125

<210> 394
<211> 246
<212> DNA
<213> B.fragilis

<400> 394
ggtttaagtc atcttcattc tttttttatct tccattttcg gatttggtct tgccggcgtt   60
ctgctgacca agtattgtcc ggatccaact ttgtttgaat ccagagaggc ctgggaagtt   120
gccagtgtga atgcacatta catctggtat tactttgcgg caatcggttt ggttgcagca   180
attgctttgc ttattttttgc aaaaatcact gatttcatcg ataaaaagaa gaaaactaac   240
gtctga   246

<210> 395
<211> 1521
<212> DNA
<213> B.fragilis

<400> 395
aacaacaacc aacgtatgat gaaccaagaa ttattaatga gtcccaaccg tttggtgact   60
tttctgcaaa agcctgctgc tgagtttaca aaaagcagaca tcattaacta tatccaacag   120
aatgaaatcc gcatggtcaa ttttatgtat cctgctgcgg atggacggct aaaaactctg   180
aattttgtga taaacaatgc ttcctatctg gatgccatcc tgacttgcgg tgaacgggta   240
gatgggtcga gtctgtttcc tttcatagaa gccggaagta gcgatctgta tgtaatacca   300
cgtttttcgca ctgcattcgt cgatccgttt gcagaaatac ctacactcgt gatgctttgc   360

```
tccttcttta ataaagatgg ggaacctttg gaaagctctc ccgaatatac tttgcataag    420
gcttgcaaag catttacaga tgtaacaggt atggaatttc aggctatggg agaattggaa    480
tattatgtaa tttccgagga tgacggtcta tttccggcta ccgatcagcg tggatatcac    540
gagtcgggac cttatgcaaa attcaatgat ttccgtacac aatgtatgtc ttatatagcc    600
caaacaggtg gacaaataaa gtacggacac tcggaagtag gcaatttat gcttgacggc    660
aaagtttatg agcaaaacga aatagaattt ttacccgtca atgccgaaaa tgcggccgat    720
caattaatga ttgccaaatg ggttatccgt aatttagctt accaatatgg atatgatatt    780
acttttgctc ccaaaattac agtaggtaaa gctgggtcag ggctacacat tcatatgcga    840
atgatgaaag acggacaaaa ccagatgctg aaagatggtg ttctctcgga taccgctcgt    900
aaagccattg ccggtatgat gcaacttgct ccttccatta cggctttcgg caataccaat    960
cctacttcat acttccgtct tgtaccccat caggaagcac ctaccaatgt ttgttggggt   1020
gaccgaaacc gttcagtatt ggtacgtgtt ccgttaggat ggtccgcaca aacggatatg   1080
tgtgcactag ccaatccttt ggaatcggac agtaactatg atactactca gaaacagacc   1140
gtagagatgc gttcaccgga tggctcagcc gatctttatc aattattggc aggtcttgca   1200
gtagcttgtc ggcatgggtt tgagatagag aacgctttgg ctattgcaga gcaaacgtac   1260
gttaatgtaa atatccatca gaaagaaaat gcagacaagt tgaaagcttt agcccaactt   1320
cccgatagct gtgcagcatc tgcagattgt ttacagaaac agcgtactgt atttgaacag   1380
tacaatgtat tcagtcctgc tatgatcgat ggtattatca gtcgattacg aagctataat   1440
gatgccactc tacgcaaaga tatacaggac aaaccggaag agatgctggc actggtgagc   1500
aaattcttcc attgtggata a                                             1521

<210> 396
<211> 570
<212> DNA
<213> B.fragilis


<400> 396
aatatggacc aattgcaatt aatacaaagc aaaatatatg agatacgtgg acagaaggtt     60
atgctggatt ttgatttggc ggaaatgtac ggtactgaaa ctaaatattt aaaacgttca    120
gtaaaaaata atattaaacg ttttccatca gatttttatgt ttgagctaac gaaggaagaa    180
ttcgacagtt tgaggtgcag ttttagcacc tcaaaaagag gcgggacccg atatatgcct    240
tatgctttca ctgaacatgg agttgctcaa ctttcttcag ttcttaacag cgatttggca    300
attgagatta atattcaaat cataagggca tttatagcag ttcgtcagtt aatctccaat    360
cctccggttg atagagtcga taaactgaaa gaagaaatca aagcattaaa agattacatc    420
gaagaagcat ttactgacta caacgatata aatgatgata cgcgcatgca attggaatta    480
attaatcaaa ctttggcaga attgcaagcg aaaaagaaag cggaagaaaa acctcgtaac    540
ccaatagggt ttatcaaacc taaacactaa                                     570

<210> 397
<211> 231
<212> DNA
<213> B.fragilis


<400> 397
caaaaacgcc actccggaat agaccagatt gtctgctgtc accaggtact cttctttgtg     60
atggacaaga ccgcagaggg ctatgatgaa agcacatccc aatacggaat aggagaacat    120
atagacggtg acatggggaa taaaccaaat actttgcaaa gccggcataa gcgactggtc    180
atgtatctcc ggtttcagca gattgattat tacaaagaca gtggacaata a             231

<210> 398
<211> 1002
<212> DNA
<213> B.fragilis


<400> 398
atagtaaaac aaagaataat gcaattctat agtagaaatg aagctattaa ccgtataaac     60
aaactggctg gagcaggaaa agcatttctg tttattatag attataaaca gaatgttct    120
tttatagaga aagtggatga tattgattca tcggagctac tctacaatct gaacggtttt    180
acaaactgca cgtctgttgt tacacctttc agatacccaa taatatggca gccccaacct    240
```

```
atttctttaa gccaatataa aagatcgttt gatattatac ggaaaaatat cttgagtgga    300
aatagcttct taacgaatct cacttgcatg accccgtca acactaatct agggttaaaa    360
gatatatttt atcattctcg ggccttatac aaactttggt tgaaagagac ttttgtcgtt    420
ttttctccag aaatatttat tcgtatagaa aatggaagaa tcagttctta tccaatgaaa    480
ggaacaatag atgcaacttt accttctgcc acaagattac tgatggagga tgaaaaagaa    540
gcagcagagc atgccacaat cgttgatctg atacgaaatg atttaagtat agtggcagat    600
aatgtatctg taacccgcta tcgatatgta gatacactct ataccaatca tggtcccata    660
ttgcagacca gctctgaaat aagtggagtt ttaccgaaaa actatgttga tcatctggga    720
gaaattcttt tcagacttct tccagccggt tctattacag gagctcctaa gtacaagaca    780
atagaaataa tagagcaagc agaagaatat gagagaggat tctatacagg catcaccgga    840
tactttgacg ggagaaaact ggatagtgcc gttatgatcc gctttattga agagcagaat    900
gggcaaatat tttttaaaag tgggggagga atcacctgca aaagtgattt ggaaaatgaa    960
tataacgaaa tgaagcagaa agtttatgta ccaatttatt ga                     1002
```

```
<210> 399
<211> 537
<212> DNA
<213> B.fragilis
```

```
<400> 399
acaatgaaac atcatgtaca ccttatcatt tattttgctt gcatttcagt tggtatactg     60
ctgtgtgctt gtcgttcttc ttctctacat tctaatcaat tcaaagagaa tggaactttt    120
cagcataatt acaatgaact caataccggt accgggacca ttgcctcaca agtcaaaacc    180
actaaagacg aacacggttc atcctggaag atcacgtacc attttgacac ggcacaaaca    240
cccgatccca caaccggcct accccccacta tcgggtatcg agattgaagg gagcgaaaaa    300
cagagtaaaa ccgcgcagga aagtaatgac actgtacact cttcgaacag ctcttcaaag    360
agagaggtat ccggtcaaac catacaaaga gaatccggga cagagaccaa gaaagatagc    420
aaagtagcaa ccggtacgga tgatggcata agaaacggcc tcagtatcgg gatacctttg    480
ctttttatca tcatagcact atcgtattat gccaagcgac agaatacatc aaagtaa       537
```

```
<210> 400
<211> 828
<212> DNA
<213> B.fragilis
```

```
<400> 400
gtaattttgc acaaaattaa acagatgata aagtacattg caacattgtt actgacggtc     60
ttattcgtag catgcaataa tggcaaagga caacagccct ctgaagaaaa tgaagacccc    120
aaggccaaag agattctcca aggcatttgg cttgatgatg aaactgaaac tcccttgatg    180
cgcataatag gagatacgat ttattattcc gatgctcaaa gtgctccggt ttatttcaaa    240
atcctaaaag atacgctcta tacctatggc aaagacgtaa cccactatca aattgacaag    300
cagagtgaat attctttttg gttccattct ctggctgata atattatcaa gctccataag    360
tcggaagatc ctaatgatac attggcattc tcctttaagt cggttgaaat cattccgacc    420
tatacagaag tcactaagaa ggacagtgtg gtaatgttcg atggcgtccg ctacagagcc    480
tatgtataca tcaacccctc acaaatgaaa gtagtgaaaa caacttattc ggaagatggt    540
atcagtatgg acaatattta ctatgacaat gtaatgcata tatgtgtgta tgaaggcaaa    600
aaaagtttat atgccaagga cattaccaag caaatgtttg tagatgtaat tccaacagat    660
tttctgcaac aggccattct atctgatatg aatttacag gaattgaccg caaaggctat     720
cattatcaag cactcgtctg tattccggaa agtccggtat gcaatcttgt gaatcttacc    780
atcagtttcg atggaaaact aaatataacg gctgcaaaat ataaataa               828
```

```
<210> 401
<211> 381
<212> DNA
<213> B.fragilis
```

```
<400> 401
aatcatttta atactttaaa ttatttaatt atgggcttag atatagcaat tgcttcagct     60
gtagttgaga ttattacact gatttttttc ttcgtttttat gtcgaaatgt ttccaaaatc    120
```

```
aaaaaagaga ttgttagcaa tgacaattta cctggtatgt ttgccatgta tatatccttg      180
ggagaaacgg acaaagcaaa aaaaatattg tataaggcga ttagtaaaga accggaattt      240
atcgcagcat tctgctacaa tggcaataat tcagcacagc aatctacatt gaaaagaaaa      300
tataaaccat acttggaaat ccttggactt gagttagatt ttgaattggt aaataagttc      360
atccaagaaa gagaaaagtg a                                               381


<210> 402
<211> 1413
<212> DNA
<213> B.fragilis


<400> 402
gtaatcatta agaatagaat attaatcatt ccggctttct ttcttcttcc caaaagaaga       60
agaaagggca aagcccctaa aatttttaaat aagatggcaa caaaagagta cttcccgggt      120
ataggggaaa ttaaatttga aggtaaagac agtaagaacc cgatggcatt tcgctattac      180
gatgccgaga aaatgattaa cgggcgtagt atgaaagatt ggttaaagtt tgcaatggca      240
tggtggcata cactttgtgc cgaaggcggt gaccagtttg gaggcggaac caaacagttc      300
ccatggaacg gtgaccctga tcccgtgcag gctgccaaga ataaaatgga tgccggtttc      360
gagtttatgc agaaaatggg catcgggtat tattgcttcc atgatgtcga tctggttacg      420
gaagccgaca gcatcgaagc ctatgaggcc aacctgaaag agctggttgc ttatgccaag      480
cagaaacagg ccgaaacagg catcaaactg ttgtggggaa cggccaatgt attcagccac      540
gcgcgttaca tgaacggtgc agccaccaat cccgattttg atgttgtggc ccgtgccgct      600
gtccagataa agaatgcgat tgatgccacc attgaactgg gaggtacgaa ttatgtcttt      660
tggggtggac gcgaagggta tatgtcgttg ctgaatactg atcagaaacg cgaaaaagaa      720
catctggcac agatgctgac cattgcccgt gattatggac gtgcacgtgg tttcaagggc      780
actttcctga ttgaaccgaa acccatggaa ccgacaaagc atcagtatga tgtcgataca      840
gagacagtta tcggcttcct gaaggctcac ggactggatc aagacttcaa agtgaatatc      900
gaagtgaatc atgccaccct tgcaggacat acgttcgaac atgaactggc ggtggctgta      960
gacaacggaa tgttgggggtc tatcgacgca aaccgcggcg attatcagaa cggatgggat     1020
acggatcaat ttccgattga caacttcgaa ctgacacaag ccatgatgca gattatccgt     1080
aacgacggat tgggtaacgg cggtacaaac ttcgatgcca aaactcgccg gaactctact     1140
gacccggaag atatctttat cgcacatatt gccggaatgg atgctatggc acgtgccttg     1200
gaaagtgcag ccaatctgct caatgagtct ccttaccaga aaatgttgtc cgaccgttat     1260
gcctcgttcg atgctggcaa gggcaaggag ttcgaagaag ggaaactcag cctggaggaa     1320
ctggttgctt atgccaaagc caacggagag ccgaagcaga ccagcggcca acaggaactg     1380
tatgaagcac tcgttaatat ctactcatta taa                                 1413


<210> 403
<211> 597
<212> DNA
<213> B.fragilis


<400> 403
atgatctata atattaacgt aataacaaat aataaattta gtatgaaaaa gaacagattg       60
actttggttg ctgccatttt tctcagtggt actatcctat ttagttcatg tgtaggatca      120
ttcggactgt ttaatcgtat ttcttcctgg aaccagtcta ttggtacgaa atttgtaaat      180
gaacttgttt ttcttgcttt aaatatcgtt ccggtatatg gcgttgctta tctggcagac      240
gctttggtta tcaattctat tgagttctgg agtggcacca acccgatggc taatgtaggt      300
gatgttaaga aagtgaaagg tgagaatggt gattatttag taaagactct tgaaaatggc      360
tattctatta ctaaagaagg tgaagattca gctatggagt tgatttataa taaagaagca      420
aatacttgga atgttgttgc cgatggagtt agcacagagc tattgaaaat gaacaatgac      480
ggtactgctg aaatgaactt accgaatgga gataaaatga atgtaactct tgatgcacaa      540
ggtatgatgg ctgcacgtca ggctacaatg ggcggactgc tctttgctgc acgttaa       597


<210> 404
<211> 1533
<212> DNA
<213> B.fragilis
```

<400> 404
```
actacaaata aattaataaa cagtatcatg ttttttattag gttatgatat aggcagctct      60
tcggtcaagg cgagcctggt agatgcagaa acaggtaaat gtgtcgcttc tgcgttcttt     120
ccgaaaacag aggcgggcat cattgccata cgtcccggat gggcagagca agaaccggaa     180
agttggtggg agagcttgaa actctccacc cgatccattc tatcggaatc acgggtagat     240
gccaaagaca tcaaagccat cggcatctct tatcagatgc acggtctggt gtgtgtggac     300
aaacggcaac gcacactgcg tccggccatt atctggtgcg attcacgtgc ggtctcctat     360
gggcagaggg cattcgaggc aatcggtgag aagttctgtc tggcacattt gcttaattct     420
cccggaaact ttactgcttc aaaactggca tgggtgaaag aaaacgaacc ggatatctat     480
gaacagatcg ataaaatcat gttgccggga gattacatcg ccatgaaact gagcggtgaa     540
gtatgtacga caatagaggg actctccgaa ggaatgtttt gggacttccg aaacaaccgc     600
ccggccgact tcctgatgca atattacgga atcgatcctt cgctgatagc cgacatccgg     660
cctactttcg ccgaacaggg gcgactgaca ggtacggctg cccgggaact cgggctacaa     720
gaaggcactc cgatcactta ccgtgcagga gaccagccca acaacgctct ttccctgaat     780
gtgttcaatc cgggtgagat agcttccaca gccggaacat cgggagtcgt atacggagta     840
aacggcgaaa tcaattatga tccgcagtca cgtgtcaaca cctttgccca tgtcaaccat     900
actgctgccg atccccgcct cggcgtattg ctctgtatta atggaacggg gattctcaac     960
tcgtggatca ggcgcaatgt tgcccccgaa ggtatttcgt acgccgagat gaaccgtttt    1020
gcttcatccg ttcccatcgg cagtgcaggt atcagcatcc ttcctttcgg caacggagca    1080
gaacgaatgc tcgataatcg ggcaaccggt tgcggtatac acggcgtaga cttcaacagg    1140
catgacaaat cacatctgat ccgggcggca caggaaggaa tcgtcttttc atttaaatat    1200
ggcatcgaca ttatggaaga gatgggcatc cccgttaaaa agatccatgc cggacacgcc    1260
aatatgtttc tgagttccgt ttttcgcgag acactggccg gtacgacggg agccaccatc    1320
gaactctatg acacagacgg ttccgttggt gcagccaaag gagcaggaat gggagcgggc    1380
atatataaag accatgaaga agcattcgcc actctcgata agctgacagt cgtagaaccg    1440
gatgccggca acaacagga atacactgat gcttacgcac ggtggaaaca atgtctgact    1500
cagtccatgc agacagaaac agagaataag taa                                 1533
```

<210> 405
<211> 255
<212> DNA
<213> B.fragilis

<400> 405
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gcgatgaata aacaaatgac aatagcgaaa aaacgctatt ctttttaaaaa agcatatgaa      60
agggtgccat tagggcagat tgaaagttta aaaaaagaac tgtatagtgt ctttagtatc     120
aataatcgaa cctcttggta caataaactt aaaggtataa cttctcccag catagaagta     180
gttgaagctg ttgagactgt atttctaaaa tatggtattg aaaattgttg ggaaattaca     240
gagatcaaat tatga                                                       255
```

<210> 406
<211> 237
<212> DNA
<213> B.fragilis

<400> 406
```
tcagaggata accaatccca tatctattta ctttgctttt ccagatctct gacagccgga      60
atgcacatca tcaaaattga ggtaaataca attgctatcc cacaacagat aaaaatattg     120
gctattccta aactatcagc aataaatccg gtaatgaaca acccaatgat agaaggcaat     180
aagctcacgc tgtcaaaaag agaaaacaca cgtcctaaat atgccggttt aaactga        237
```

<210> 407
<211> 1158
<212> DNA
<213> B.fragilis

<400> 407
```
tttatccgta aagaaagcca gccaggaatg acattcgaat tacaatatac agacgcaaaa      60
agtaatgccc gtgccggtct gattacaaca gaccacgggc aaatacaaac ccctatattt     120
```

```
atgccggtag gtacaatcgg cagtgtgaaa ggagtacatc agactgaatt gaaagaggat    180
attcaggcac agatcattct gggaaataca tatcatcttt atttgcggcc gggactggat    240
gtactcgaaa aagccggtgg attgcataag ttcaatggat tcgaccgtcc gatgctgacc    300
gatagtggtg gttttcaggt gttttctttg tccggtatcc gtaaattgcg tgaagaaggg    360
gccgaattcc gttcgcatat tgatggcagc aagcatatct ttactcctga aaaggttatg    420
gatatcgaac gtatcatagg tgccgacatc atgatggcat ttgacgaatg cccaccgggg    480
gattcggatt atgcatatgc caaaaagtca ttgggattga cacaccgctg gctcgacaga    540
tgcattcaac gattcaatga dacggaacct aaatatggtt acagccagtc tcttttcct     600
atcgtgcaag gatgtgtata tcccgacctg cgtaaacaat ctgcagaata catagcttcg    660
aaagatgcag acggtaatgc tattggcgga cttgccgtag gcgaaccggt agataagatg    720
tacgagatga ttgagttggt gaacgagata cttcccaagg acaaaccacg ttatctgatg    780
ggagtcggca caccggttaa tattcttgag ggtattgaac gtggagtaga tatgttcgac    840
tgtgtgatgc ctacccgtaa cggacgaaac ggaatgttgt ttacgaaaga cggtatcatg    900
aacatgcgta ataaaaaatg ggaagcagac ttctctccta ttgaagctga cggtgcttcg    960
tatgtagaca cattgtacag caaagcatac ttgcgccatt tattccatgc gcaggagttg   1020
ctggccatgc agattgcgtc tatccacaat ctggcgtttt atttgtggct ggtaggagaa   1080
gcacgcaagc acattatcgc aggagacttt tcaacctgga aacctatgat ggtgaaaaga   1140
gtgtcaacaa gactataa                                                 1158

<210> 408
<211> 1068
<212> DNA
<213> B.fragilis

<400> 408
ctaaaaagta aaaaacaggt aatgaaaaag ttttccgat ttcaattatg ttgtatttgt      60
cttttggtac tgattgtatc tgcttgtaag gtgaaaaggc cggacagcgt catatcagaa    120
tcggagatgg aaaatttatt atacgattat cacattgcca aagcgatggg agagaacatg    180
cctggtggtg agaactataa aaaggcattg tacgtcgaag cagtattcaa aaagtatggt    240
acaacagaag aagttttcga ctcatcaatg gtatggtata cccgaaatac aaaaatatta    300
tcggaaatct atgagaaagt gaacaaaaga ctgaaagcgc agcaaaatgc catcaaccat    360
ctgattgcat tacgtgacaa taaacctaag atgtctgctc cgggtgacag catccgatgtt   420
tgggcatggc agcgaattgc tcaattaaca gaggctccat taaacaataa atttacgttc    480
actctaacctt ctgatacgaa cttcaaaaaa cgcgatgtgt tgctttggaa aatgcaatat   540
aacttcctga gtgaaattcc tgattcaaca atggctccaa taatggctat gcagattgtt    600
tatgaaaacg acacagtgac ccatagttgt gtgaagcaca ttttttaaatc tggcattcaa    660
aatattcgtc tccaatcgga tacaatgaat atcaaggaga taaaaggatt tatcttttgt    720
ccgctatctg aggaatcaat aacacttctg gtcagtgata tttcattgac ccgttatcat    780
gcaaatgatt caataacaca gataggtaga gattctctaa aaactgattc aataaaagaa    840
aaaagtaaag acgattctat tcagaagaaa actcccaaag acactattca agcatcatca    900
ccccatcaac gtacgaatcc gaacgatctg aatcgtccta ataatgatgt ccggcctatt    960
aaaccggaac aacgtgaaaa agagatgcag atagaaaaag agaaacagca attggaaaga   1020
caacaaagga ccaatccaag gaggccatta cgtcgtcaga ataattaa                1068

<210> 409
<211> 183
<212> DNA
<213> B.fragilis

<400> 409
ctcttaatca atgggtccag ggttcgagtc cctgagggtg tacaaaagga gattataaat     60
aatctccttt ttgttttttgg tggcattttg aaatattgtt ttatctttgc caccgcaaaa    120
attaatttga tgaaaacaac ttatcagttt aacatactcg tcaatcattt ggagctggct    180
tag                                                                  183

<210> 410
<211> 402
<212> DNA
<213> B.fragilis
```

<220>
<221> unsure
<222> (276)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 410
```
tatattccca ataaacaaga tatatcactg ataattaaca ttaattttat tattatgaac    60
tttgatttaa aagcgtttag aaaacgattt ggtttaaaac aggttgaagt ggctcattta   120
ttcaattgtg ggcagagcaa tatttcagat attgagactg gaaaaagagg gcttgaagag   180
tatcaaacaa gaattctctt cgataaatac ggagaagagg tagttaaaga gtacttaata   240
cctgagagtg ccattcatca agggaatata aacggngata atataaacgg gcacaatgtc   300
actgtaaata aagcagactt tgataaactt attagcttgt taaacaaaag ggatgaacaa   360
atagatagat tattgcgtat tattgaaaat ttaaataaat ag                      402
```

<210> 411
<211> 621
<212> DNA
<213> B.fragilis

<400> 411
```
gagaggaaca atattatgac attaaagcaa gctcagaaac tgtacgatga ttcagtgcag    60
gcaaaaatga ctcatgccga ttattgcatg actcaatcgc aacttgaata tatcggtaga   120
actatgtggg gattcacccc agacaaacaa gcaaaggtgt tattcaccaa agtaggaaag   180
agggtgtcgg tagttattgc gtcacgagaa gcattatta aagagatagg aaaacctgtt    240
atctgcaaat gttcggtatg cgatatgtat tatttagctt atagaaagtc ggtcgatgct   300
cacgatgaat taaatgccca atgtccaaaa tgtgattctc ttggttgtga ttcagatatt   360
gtacattttg aaacaagccg caaattttgg ctaaacgaga agatcgttaa aatccttact   420
cccaataaag accctgaacg agtggaagct atgtacgatt ccgctccgga agattttcct   480
gcacaatatg agatgttgct tcccgatgga aagaggtgta cagattgtgt gcgatgtgcc   540
acatgttgca gcgtatttgg tcaaaaagaa agtgccacta tttgccagtg gcatccttcg   600
agatattcag cgggagaata a                                              621
```

<210> 412
<211> 690
<212> DNA
<213> B.fragilis

<400> 412
```
cattcactaa atagctttaa tcaccaatgt ctaattttaa aacggcaaaa catgaaaact    60
ccatctttaa ttctgatgac aattatttta tgtaatctca gtatcccaat aaatgctcag   120
atactaacct cccgccagca aaaggaagat tttgacacct tatatagctt actacatcag   180
gtacatccgg acttatttgt gtatcaaaca caaaaagaat ttgaaaagaa acatgattca   240
atatatagtt cgttgaataa agaacgaaac ctttctgatt tttacttttat agtctctcca   300
tttgttgcat ctgttaaaga tggtcatact aatttcacaa ttcctgctac tcaagacaga   360
attacctatt tgaataatgg agggctgact ctgcctttac gcttaaaaat agtagagaat   420
aagatattgg ttgattttcc tctaatatcc tgttcaatac aggaaaatga tgaaataata   480
tgtatgaata atataaatag tcaaaccata ttaagccaat tgtatctctt actgggagct   540
gaaaaaggaa acgctattaa ggaaaatcaa ttgaccagtt atctttctac tttgctatgg   600
tataaatata attggggtga aaatatgatt ttacaattaa aagaggaaaa aagatatgga   660
aagaatcatt ggatggtatc agccaaatag                                     690
```

<210> 413
<211> 477
<212> DNA
<213> B.fragilis

<400> 413
```
catattgtaa atcaacagaa tatgaataca aacaatatcg gaggagtcat tcaggcagat    60
```

```
ttcctgttca cggatgaaat aagtttattt tcagtcatca atcactcagc cgttatcagc      120
cttcaccggc ctaatacctg gagaaacctg cctatcacct atatgggagt ttctccagat      180
gtggaagcgg acgacactca agccggtacg ctatataaac agacccttac catccgcctg      240
aaacgcacag gactgacaga ttcagaactt cacatcctgc ggactatcaa tgtacgtggt      300
tgcgtagtaa gatgcaagga tgcgaatggc aatatccgat tatatggaag caaagagtac      360
ccgcttctgg gaaccgtgat agagaaaaca ggaaccaaag cctccgacct ctccggaatt      420
gaagccactt tttccggaaa aggcgcctat cctccactac ctgttacaga gttataa       477
```

```
<210> 414
<211> 243
<212> DNA
<213> B.fragilis
```

```
<400> 414
aaaggatcaa aaatgggaac aggatttacg gaatacgaag aaagccttat acaagcaatt      60
tgttcgttat attatataca gacgaggact tataaacagg gtgtgttcat aggtatgatt      120
cctaaaaaca cacgtataac cttgaatggc atatatatga tgaagttatt aaataccggg      180
aacgctgttt atattgaagt aaaaggggga attaatgtat taacaattat acatcaacaa      240
taa                                                                    243
```

```
<210> 415
<211> 609
<212> DNA
<213> B.fragilis
```

```
<400> 415
attatgccaa aaaaagacac aacctacgac cgcatcgaac gctccctgtt caaagatcgg      60
ggtgaatccg ctctccagtt atcaccaaag gagatggaaa ttaagaatcg gatgatgctt      120
tgtgttagta agaaaatgga aagcccatta attgaagacc aggagctcgt tacttttctc      180
atgcacggat gtggagggca agcggaacct gtttcccaat cacaggccta tcgcgatatc      240
ggtatgatca accggttggt cggtaacatc cagttggcgg ccaaatcctg gtatcgctac      300
atgatcgtag aaggaggaaa gaaggcattt caactcgcta tcgacaacgg agatgctaaa      360
ggagctgccg ccgctctcga caagataggt aaatacaccc gttccgacaa agacgatgac      420
gcattcgact tcagtcagct tattcccccca tcttttgaac cttctgacga tgtgacgaca      480
cttgagggta ttgaagtgat agacaatctg gagcaacgcc gccaggaact ccgcagcttg      540
tgcaaagata tgttgaccaa acaggcgaca gatattcaaa ccattgaaga ggaggatatt      600
gaggaatga                                                              609
```

```
<210> 416
<211> 363
<212> DNA
<213> B.fragilis
```

```
<400> 416
cgtactgcaa agatggaaaa tattttgat tctgcaaaaa caattcaaga aaaacgcaca      60
atattaaaag gtttatcaaa gccgcttcaa attttggtga agaggctgc tattcctacg      120
gtaaacgatg gactgaaagc gatatacgca cagtctgggc acaccgaact taaaacgctg      180
aaacagtgga ataaggaggg caggagtatt aaaaaaggtt cccatgcttt atgcctttgg      240
ggtgcaccta agaaagtaga gacgacccaa gtggaagaag cacagggaga agataatgac      300
ccaatgaatt tctatccgat ttgttttgta ttctcaaatt tgcaggtata tgaaaaacag      360
tga                                                                    363
```

```
<210> 417
<211> 195
<212> DNA
<213> B.fragilis
```

```
<400> 417
attgcacaaa attgtatttt gtacgcacaa tgtatcaatc gtacaaaaac gtaccatgtt      60
```

```
tcgtacggat ataaaccaat tataatcaac acattatgtg ataagactgc acaatttaca      120
cagttgcaca aaaaaggagt accgtttttg caaggggggat tagtttgttc cggtaagtct      180
tgtttatgtc cgtaa                                                       195


<210> 418
<211> 759
<212> DNA
<213> B.fragilis


<400> 418
acaattaaaa acacaataac catgaaaaaa attattttat tacttgcttt atgtttttact     60
gcaaataatt tctttgcaca aaccacagat ccgaatcagt tgaagaatga aggtaatgat     120
gctttgaatg caaaaaatta tgccgttgct tttgaaaaat acagcgaata tctgaaattg     180
actaataatc aggattctgt cacagcctat aattgtggtg tatgtgcaga taacataaag     240
aaatataaag aagccgccga ttactttgat attgcgatta aaaaaaatta taatcttgca     300
aatgcatata taggtaagtc tgctgcctat cgcgatatga aaaataatca agagtatatt     360
gctacattga cggaaggtat caaagctgtt ccgggcaatg ctactattga aaaattatat     420
gctatttatt atttgaaaga aggacagaaa ttccaacaag ccggcaatat cgagaaagca     480
gaagagaact ataaacatgc cactgatgtg actagtaaga agtggaagac tgacgcttta     540
tatagccttg gagtgttatt ctacaataat ggagccgatg ttctacggaa agcaactcct     600
ttagctagtt cgaacaaaga aaaatatgct tctgaaaaag caaaggcgga tgcggctttc     660
aagaaagctg ttgactattt gggagaggca gttactttat cacccaatag aactgaaatc     720
aaacagatgc aagatcaggt aaaagcgatg attaagtaa                            759


<210> 419
<211> 369
<212> DNA
<213> B.fragilis


<400> 419
aacatgaaaa agaaaaaaga aactccaatg catcccgttg tggaaaatat ccgtaaaata     60
attatggata aaggaattac ccaagttgct gcatctgaac ttgtgggtac ttctgcatct     120
caaatgagta aaattttgaa tggagaagta caaattagca tttggcagat ttcaaatttt     180
gcaactaatc ttggaatgga gataatagac gtatttacat atcctaataa atatgtaaaa     240
gcagaagaca ggaatgataa taaagaacct attgaggcag ttctccaaat taaactcaga     300
aaagataaaa aagatcaagt actaaagttg atatttgggg aacataattt agaaatatta     360
aacaaataa                                                             369


<210> 420
<211> 1077
<212> DNA
<213> B.fragilis


<400> 420
acaattagaa aggagggctg cttaatggcg gtatataatc gaatccctga ccggtttact     60
aacctggata tccgcgatac cctgaacgct tatggtggaa gtgtgggcga taactcgctt     120
aactatttct ctgctgctgc acacattaac atgtggagca aacgtaaacc ggtgaaaaga     180
aatatcatgt ttaatacgga ggacccgaac tggttccgtg ccgattccgg aaactacggt     240
atcaatgtcc cccgtgcagc ggatattgcg ctactgaccg gaacttacac ctatgatata     300
cctgttcagg gatcgtacaa cctgcgtgtc ggtgattttg ccggatacaa tccggaagct     360
accgtaccat tcactaccat gcttccctcc ggacttatcc ttgcttccgg cagtgccact     420
gttgtgaagt tgatgctgaa atcacttgat tcaacataca atgttgtccc ggccgatata     480
ttcccctcta attcatattt gggatgtgct gtcacatacg gaaaccggac gcttattaaa     540
acgctttcgg ttacaatttt caatggaggg gtgacactga acatatccga ttgcgagctc     600
ttgaaatcag ataagacggg agtcaggata aaggtattca tctgtacatc gcaggttcca     660
tcctggcagg gtgaaacgac acaatcctat tacagcttga acgcagagga cggttttgat     720
gagtcgaccg ttgatattgt caccccgcat gccgatgttt actcgttcgg catccttgga     780
cttagcatta tcgaagcgag aaagatatct ttaatcggta cggcgattat caactccgga     840
agtctctttc aagagggccg cttaataagc agactggaca ataattacta tttaaagtct     900
```

```
gtaaaagtcg ttgcgacccg tgcaagtgac ggtgttactg ttgccgagaa agcacaaagc    960
ataacatctt ccactacacc gacacgctta ggaaacgact ggatggcagg tgagtccgtc   1020
aacttcagaa caccggtctc taggtcttca ccggggggcgg gaggcgagca cgtcgtc      1077
```

<210> 421
<211> 252
<212> DNA
<213> B.fragilis

<400> 421
```
accctcggaa ataccggatt tactgaaagg cagtttctaa acaattcttt ttttaattta    60
tcaaactaca aattaaaagt tatgagtaga cgtagacaat tagagcatga agtgtcttta   120
gctcaggaaa gaataaaaaa agctcccaaa gatactccta aagaaatttt gaagacgtgg   180
gaacaagagt tagtcgactt ggaattagaa ctcaataatc tggttgacga cgaagaagac   240
aacaatgaat ga                                                       252
```

<210> 422
<211> 996
<212> DNA
<213> B.fragilis

<400> 422
```
aatagactga aaaacatatt gtccattgca caatttcacc aaatctgtgc tatgatattg    60
caaaaatata taactttgca cccgcaaatt aaattaaaaa acaaaaatat gaaagcattt   120
gtattccccg gtcaaggtgc ccaatttgta ggtatgggta aggacctgta tgaaacttca   180
gctttagcaa aagaattgtt tgaaaaagca aatgatatcc tgggatatcg cattacagat   240
attatgttca acggtacgga cgaagatctt cgtcagacca aggttactca gcctgctgta   300
ttcctccact ctgttatttc tgcactttgc atgggtgatg acttcaaacc tgaaatgact   360
gccggacact cactgggtga gttttctgca ttggttgctg ccggcgctct gtcttttgaa   420
gacggcttaa aattggttta tgcacgtgct atggctatgc agaaagcttg tgaggcaact   480
ccttctacaa tggctgctat tatagcttta ccggatgaga agtagaaga aatctgtgct    540
tctgttaccg ctgaaggaga agtttgtgta cctgccaatt acaactgtcc gggacagatt   600
gtaatttccg gatctgtacc gggtatcgaa aaagcttgtg aactgatgaa agcagccgga   660
gctaagcgtg cgcttccgtt gaaagtaggc ggtgcattcc attctcctct gatggatcct   720
gccaaagtag aattggaagc tgccattaac gcgactgagt tccacacacc gaaatgtcca   780
gtttatcaga atgtagatgc cctgccccat acagacccgc aggaaatcaa gaagaatctg   840
gttgctcagt tgactgcttc tgtacgttgg acacagaccg taaaaaatat ggttgccgat   900
ggtgctaccg acttcacaga atgtggaccg ggtgccgtat tgcagggatt gatcaagaag   960
atcgactcta cagtttcggc tcacggaata gcataa                             996
```

<210> 423
<211> 474
<212> DNA
<213> B.fragilis

<400> 423
```
tgcattatga agaatttaga aatcctccct ctctctgccg agagtaaaaa gcgtattgaa    60
gagttcgcaa ggcagtatca gcgatatgcc catatcgcta ttgagattgt gtcctattca   120
gaaggccggc tgattgtccg tgccgagcaa aaggacctgg ttaatgataa gttccttttca  180
aagaaagaac tgacagaacg tgtccgggac atgttcaaag atgaaattcc ggaagactgg   240
aaacttactg tttctgccgt aaacttcgac cgtaaggata ttgatgggat cactctcgac   300
tggatcaaga aacggatgga acggcttgga ttaaagaata aacatttgag caactacacc   360
ggaattgaca aatgtaccgt ttcttccatc ctttccggag acaaggagtt gaccaaatgg   420
cacaaagtag ctctatacta ttttttcaag tattatgaag tagccaattt ttag         474
```

<210> 424
<211> 336
<212> DNA
<213> B.fragilis

<400> 424

```
cataccatga acctatcttc ttttaaactg accaatatta acgaattgat atccgtatac    60
aaagagaatc cggagcgctt taatcgcttt tataacgcag tgtacctgct gctggatggc   120
attccggaat gcggaagtat tcgtgtaatg gatcactgtg aggcgtcctc ctatgacttg   180
tttataaagt gtgcatgttg gattattcag gaagagacgg aacagaaaga gttgacggat   240
gcattacttg agttttcgga tgattataca attattcgcc ggtgcgcgaa gttcgtaaaa   300
tccaaatcct gggttcattt ctactcacga cgatag                             336
```

<210> 425
<211> 1320
<212> DNA
<213> B.fragilis

<400> 425

```
aagaacatga aaattgcaat tgtcggaacc ggatacgtag gtttggtcac aggaacctgt    60
tttgcggaaa ttggcgtgga tgttacttgt gttgacacca acagcgaaaa aatagaggcg   120
cttaaaaagg ggattatccc catttatgaa aatggattgg aagaaatggt catccgcaat   180
accaaagccg gtcgactaaa atttacgact tcactggaaa gttgcctgga tgatgtagaa   240
gtagtgttct ctgctgtcgg aaccccacct gatgaagatg gaagtgctga tttgagttat   300
gtactcgctg tggcacgtac cattggacaa aacatgaaga aatacaaact tgtagtcacc   360
aaaagtaccg tacctgtagg tacagcatgc aaagttcgta atgctattca ggaagaatta   420
gacaaacggg gtgccaaaat agaatttgat gtagcttcca atcctgagtt tctgaaagag   480
ggtaatgcag tcaatgactt tatgagtcct gaccgtgttg taatcggtgt ggaatcggaa   540
cgtgcagaaa aattaatgac taagctatat aagccattca tgctaaataa tttccgcgtg   600
atattcatgg atattccctc tgccgaaatg accaaatatg ccgcaaactc aatgttggct   660
actcgtatca gtttcatgaa cgacatcgct aatctgtgtg agttagtagg agctgatgta   720
aatatggtgc gtagcggtat cggttcggat acccgtatcg gacgtaagtt cctttatcca   780
ggcattggtt atggtggggtc atgtttcccc aaagacgtaa aagctttgat aaagacagca   840
gaacagaatg gatatcagat gcgtgtgtta caggcagtag aagaagtgaa cgaaaatcag   900
aaaagcctgt tattcgacaa actggtaaaa caatataatg gaaatctgga aggtaaaaca   960
gttgcattgt ggggattggc attcaaaccg gaaacagatg atatgcgcga agcacctgca  1020
ttggtcctaa ttgacaaact gttgaaagcc ggctgcaaag tacgggccta tgatcccgca  1080
gcagcaaatg aatgtaaaag acgaatcggc gaaaccatat actatgcacg cgacatgtat  1140
gatgcggttt tggatgctga tgctttgatg ctggtaaccg aatggaaaga atttcgtctg  1200
ccttcgtggg ccgttgtgaa aaaaacaatg tcacaacagg tagtcatgga cggacgtaac  1260
atttatgata aaaaagaaat ggaagaacag ggtttttattt accattgtat cggcaaataa  1320
```

<210> 426
<211> 501
<212> DNA
<213> B.fragilis

<400> 426

```
aacaaaatga aaaatgtatc gagcgcaaaa agcgcagagg ctaaagccgt agtgttaagt    60
aatgtagcta ataagaagaa tgaaacagcc cctctaattg tgctgccatc ccttccaacc   120
gagaaagaag aaacgaaaga acaggtttcg gccaaagttg aaactcccgt tcaaacttcc   180
aagaaagaga gttcttccgt agtagccgca cccaataagc gtctaagtat tgatgaactg   240
accgataagg cggagcgtgt ttatctgctc cgtcagaaat atcaagaagt gagagaaaag   300
cggaaacagc ttgaaagctt tactatctca catgataaaa ataatgccca acttactttg   360
gtagacgcaa aagggctttc catttctaca agtaatcccg ttgcaattgg taagttgtta   420
tctgattgga tgttagattt aaataatcac ttggcgaaaa ccgaagaaga aattcgttca   480
gaattggaac ggctaaatta a                                             501
```

<210> 427
<211> 249
<212> DNA
<213> B.fragilis

```
<400> 427
aaagaaatga atagtgatgg taataaaatt ctggatgcta ttaagagaat ggcagcagat    60
gacaataaag gtttaagaat gaccactacg atagtcgatg ttaaagatga tccgctcggc   120
tcaatcgttg ctttgggac tgaaaaagtt tgcggagatg atgcatttgc ccaaacaatg    180
ggtttaccag gtaagtatat ggcatgtgcc ttttttatag atagagaaga actaaagaaa   240
tacctttaa                                                           249


<210> 428
<211> 525
<212> DNA
<213> B.fragilis


<400> 428
ctaaaaccga attacatgag gcatgtaaaa tggattttttg ttgtattact aattagttcc   60
ttgacttctt tcgtagaaaa agacaaaccc accggaggtt tgaatgtggg tgacgtagcc   120
cctgatttca caatcgaatc tacgtcagat gcacagtaca attttgattt gaccgactta   180
aaaggtaaat atgtgctgct tagttttttgg gcaagttacg atgcacagtc ccggatgcaa   240
aacgcaagtt tgagcaatgc gcttcgatca acttctcaag atgtggaaat ggtttccgtt   300
tcatttgacg aataccagtc ggtatttcag gaaaccattc gtaaggacca aatagttacg   360
cccacctgtt tcgcggaaac taaaggcgaa agctccggct tgtttaagaa ataccgttta   420
aaccgggggtt tcactaacta tttattggat ggaaatggtg tgattatagc caaaaacatc   480
tctgctgcag aactttctgc ttatgcaaac aaaatcaaag gttga                  525


<210> 429
<211> 564
<212> DNA
<213> B.fragilis


<400> 429
tatcatcaga aacgaatgaa ttatatacaa acagaaatag atggtgtgtg gatcattgaa   60
ccgaagatt tttttcgatcc gcgcggatat ttcatggaag cattcaagca acaggaattt   120
gatgctacta tcggacagat aaattttata caagataatg aatctcaatc ttcattcggc   180
acgttacgcg gactccatta tcaaaaagga gcctatagcc aagccaaact agtgcgtgtc   240
atcaaaggtg aagtgctgga tgtggctgtc gatttaagaa agtcatcacc tacatttgga   300
aagcatatca gcgtattgtt aagcgacgaa aataaacgcc agcttttta tccccgtggg   360
tttgcccatg gattttttagt gaaaagcgaa atagctatct ttacttataa ggtagataat   420
atatatgccc cccaatctga ggcttctatc ctatacaatg atccggcatt ggctatcgac   480
tggcctattg ccgattctca acttgtcatg tcagagaaag acaagcaggc aggagccttt   540
cgggaagcag aatattttga atag                                         564


<210> 430
<211> 621
<212> DNA
<213> B.fragilis


<400> 430
ggagataaga atatggaatc aaagtttcat gaactgaaaa acaggctgct gaagaatatt   60
gaccagacgt ccgaatctag gctttatatg gatatacagc tggctcaaaa ctgcgaaact   120
cttatgtcta ttatcaaaaa ggatatcgga tatctggcaa aggaaggtat cctttccccc   180
ggcatagcag aagattttaa ggacgtattt ctatctgccg gcataaaatg taactccgga   240
ggctcatccg gatatatgtt aatatgggac ggcactgcgg ttgatatttc cggaactgcc   300
acggctgtaa tctggaaaag tgaacgagcc ttcatcaaag gacgcgcatg cgctttcctt   360
cttggagagg tctctgcaat aacctgtgaa cgttcgatgg tcattgcggc aggaagctcc   420
actatccttg ccgagggaga ttccgttgtt ggagtttcag gctatcatgc ctctgtaaag   480
gcgtcagact atgctactgt cgtaaatatg aactgtccca acattgacct tcgtgacaac   540
acccgccttt ggcttcctgc acgcggaagc tttgcagccc gaaaaaattg tgatataatt   600
attaaaaaca aggaggaata a                                            621


<210> 431
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<211> 225
<212> DNA
<213> B.fragilis

<400> 431
ccaaaaaaga aggaaggaaa acctatgttt aaagatataa tcgaattaga taaacaagtc   60
gtagaccgga tcgtagataa ggtccacgaa aacaatttag aaattgagat ggaaatggga   120
gttgtaaagg acggtatggt taaagtcctt ttcctctata aagatccgga acttctgcag   180
agcgtgataa acgaatccgt tactgaagag tacgatctcc cataa   225

<210> 432
<211> 687
<212> DNA
<213> B.fragilis

<400> 432
acagaaaaga atgacacaat gagtaatata cctgttatct ttcgtttttt aaaggacctt   60
actgcgaaca acaatcgcga gtggtttaat gaacatcggg aagaatatga aatagcccgt   120
ttagaatttg aaaatttcct ttccacagta attgcccgta tttcactttt tgatgaaagt   180
attcgtggta ttcaacctaa agaatgcact tatcgcattt accgggatac ccgcttttct   240
tccgataaaa ctccctataa gaatcatttt gggggatata ttaacgcaaa agggaaaaaa   300
tcctatcaca gtgggtacta tatacatata caacctgagg gttgcatgct ggctggagga   360
agtttatgct tgccttctaa tattttgaaa gcacttcgcc agtctatcta tgataacatt   420
gatgaatatc gttcgatagt ggaggatcct gaatttcagc aattcttccc cattgtaggt   480
gaagatttcc tgaaaacagc tcccaaagga ttcccgaaag attttaaata cattgattat   540
ttgaaaccta agaattcac ttgtgcttat tccgtcccgg acagtttctt tttgactccg   600
gatattctgg acaaaataga agaagtgttc cggcaattta aacgttttgc cgactttacg   660
aatttcacta tcgatgattt tgagtaa   687

<210> 433
<211> 342
<212> DNA
<213> B.fragilis

<400> 433
ttaagagaga atatgaagcg ttttgctgca cattatttat ttgttccggg aagtggattt   60
ttaaagcaat atgcgataga aatagaagga ggatatattt gtcatatctt tcctttcagc   120
gaagaaatag agtctgtaga atggtttccg ggtgtcatac tactgactcc acaagaagaa   180
tcagatataa atactttgtt taactttact aatatagaaa aacaaagtat ttatattccg   240
aaagttacca tagatatgaa atggcgggct tatttattat atcctttcaa ttttgttaca   300
atgcagcctg tcgccgaaac tctgcacaga caattgcagt ag   342

<210> 434
<211> 1074
<212> DNA
<213> B.fragilis

<400> 434
agagaaagga aagatatgga aataataaaa accggattgg ctgctttttgg tatgtcggga   60
caggtgtttc acgctccatt tatcagcacg aatcctcatt ttgaactttta caaaatagta   120
gagcgtagta aggaactctc taaagaacga tatccgcaag catcaatagt acgtagtttt   180
aaggagttga cagaagatcc tgaaatagat cttatagtcg ttaacactcc ggacaataca   240
cattatgaat atgccggaat ggctcttgaa gccgggaaaa atgtagtagt tgagaaaccg   300
tttacttcta ccaccaaaca gggtgaagaa ttaatagctt tggctaagaa aaaaggtttg   360
atgctaagtg tatatcagaa tcgcagatgg gatgcagatt cttaacggt acgtgatatt   420
cttgccaaat ccttattagg acgtttggta gaatatgaat ctacatttgc tcgttatcgt   480
aattttataa agcctaatac ttggaaagag accggagagt ccggtggtgg attaacctat   540
aatttggggtt cacatctgat cgatcaggct attcagcttt ttgggatgcc tgaagctgtt   600
tttgcagatt tgggtatcct gcgtgaagga ggaaaagttg atgattattt tataattcat   660

```
ctgttacatc cttcgttggc accaaatgtg aaaatcacct tgaaagcaag ttacctgatg    720
cgagaagccg aaccacgttt tgccttacat ggaacactag gttcgtatgt taaatatgga    780
gtcgataaac aggaagctgc tctattagct ggtgaaatac ctgaacgtcc gaattgggga    840
gaagaatcag agcaggaatg gggattatta catacagaaa taaatggaaa agaaatctgc    900
cgaaaatatc cgggcatagc cggaaattat ggtggctttt atcagaatat ttatgaacat    960
ttatgtttag dacaaccatt ggaaacacat gcacaagata ttttgaatgt gatacgaata   1020
atcgaagcgg cttatcaaag ccatcgagat aataaaattg tcaatcttaa atag         1074
```

<210> 435
<211> 546
<212> DNA
<213> B.fragilis

<400> 435

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ataataaacc taaatatgac ggctaaattt attattatgg tattggtatt agcttatatc    60
atggttataa tcgctatatc aatttatttta ataaagataa tatgtactcg ttacaaccaa   120
aactcagatc agatactccc tcctcccaat atgcactcta ttcaggagag tgcatccatg    180
catttggtaa gaataggaca gttgcctcac ccaggacctg gatattgtta ttacgaatta    240
ggaggaatga gatatcaagc gctaacagga tttgacattg gcgtacacga aggatatgca    300
aaagcagagc ttaataatcg gtatgataaa tatgcggttg gagtctacag agaaggagat    360
cacaaattaa tgggatacgt tcgaagagaa caaaatagag agctttatga atttatgtta    420
aataataatt gtatagctaa agctaaattt cgaatatgga tacaccaagg agaaatctat    480
ggagcagctt acataaaaga gaatggaaaa tcttcattag gctttaagtc tgacattaaa    540
atttag                                                               546
```

<210> 436
<211> 525
<212> DNA
<213> B.fragilis

<400> 436

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aaactaattg aaatgttgaa cgaaaaaaga actcaaagaa ttatgaaaag taaattcctg    60
atatttttgt cggcagtagc catgctgtta ttatttagca attgtggaag caaaacaaca   120
agtaatgatc aggccactac cgaagtgaaa gacactgtca cttcaaaaga agaagctgta   180
ccggatagtg tatctatctt gggagaccag gtatatgata tagtgaacac agctcccgaa   240
tttccgggag gaatgaaagc gtgtctcgag tttctctaca agaatattac ttatccggca   300
caagctattg aaagtaagca ggaaggtcag gttgtgatac agtttgttgt taccaaaaat   360
ggtaaaatta ttgatccgaa agttgtgaaa agtgtatctc catcacttga cgcagaggcc   420
atacggatca taaatttaat gcctgactgg actccgggaa aacaaaaaaa tggtcaggaa   480
gtgaattcac ggtttacact tccagtccgt tttacactta aatga                   525
```

<210> 437
<211> 438
<212> DNA
<213> B.fragilis

<400> 437

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accatgtatg atattgtagc gcagaggctt agactgtttt tagcaaagaa agatatcact    60
tgtaaaaaat tgtcggctat gattttatg tcagaggcga cgcttaaagg caaattgaat    120
ggtacaagaa cgctagatct taatacaata atatccattg caatacggct tgaggatctt    180
tctgttgaat ggcttcttcg tggcgaaggt gatatgttta aatctagttc tggtgtttct    240
attttatctt catcagtacc tatatttaca ggggagacct cgtttatata cagtatgtat    300
aaagaagaaa gagaagaggt taaaacttta ttaaagcaaa atggtatatt ggaagagcgt    360
attcgtcagc tcgaggatga caatagatta ttaagagatc aagttgtaac agaattaaac    420
ctaaatacta aactgtag                                                  438
```

<210> 438
<211> 369
<212> DNA
```

<213> B.fragilis

<400> 438

```
aagatgcatg atattgtaac gcaaaggctt aatcaatttt tagttgaaaa gaatattact    60
tataaagaat tatctggtat gattcttatg tcggaaacgt cactttgtag aaagttgact   120
ggttcaagga gtcttgattt gcatacatta atatctatag tagcatgctt gccagatgtt   180
tcttccgagt ggcttcttag aggcaaaggt agggtgtgta attcttcttc gagcattagt   240
tccgatgtct tagtagaaga acttaaaatg gaaaataacc tattaaaacg aaaaattcaa   300
gttcttcaag aattgttgga gtttaagatg gaaaaaatca gagctgagaa tggtaacata   360
aaaaaatga                                                           369
```

<210> 439
<211> 912
<212> DNA
<213> B.fragilis

<400> 439

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cagaaaagtg accattatgt ttcttctttg ttatatagtg ttttcattta tcatatggta    60
agaaaaagtt caataaataa atacgagtta gacgtcagaa aggggttaca agaactcttt   120
gacaaatgtc gacacaatat gaagcattct ggggatttat tattatgtca caaaatggc    180
ttcattgact acaaaggtcg cccatgtgtt ggattaggtg atgaagggct taattgtatg   240
caacaagtca attttatttc gtttaatgga ataggaaata ttactgatga caatgattat   300
tataaaaaag aaggaaataa cttttttttat ggtaattctg agtttgaagc tgatattatg   360
agacaacata ttacctatat gaatatatgg gaaaattctt acttttacg ggtattcact    420
caagtggtaa acgtgttaaa tggtttaaat tataattgga atttgacatt caagaatctt   480
aagcccaatc aaaaaagcga acaaataaga gaaggtataa taaaattatt agatctatcc   540
cccaacttcc aacgtatact taaagatgca tatgtcggac aaatacgaaa tgctgtcgct   600
catacacaat accattgtat tcaaggagga atcttatatg acaactactc accatcaagt   660
aaatattcta tcctgcaagg tctttcttat gaagaatggg agaagaaata tgtctactct   720
ttttcatat ttataggtat attccaaatg ttaaaacaaa tcacaaacga attttatctt    780
ccttgttccc aattaacctt tgcaaaggga gttccaattc aaataccact ttcggacaac   840
aaaggatatg cagagactta tttatatccg aatcaaaaag gagatatttg gagatttaca   900
agaataattt ga                                                       912
```

<210> 440
<211> 213
<212> DNA
<213> B.fragilis

<400> 440

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gcatatcgcc taaacgagaa acaattgtcc atgtatatcc atcatttgat ggtaaaggac    60
cacaagagaa aatattatta tctatcatat gaaaagagat tcatatttat aattaattta   120
gtttctgcta aattacaaaa tagtaatgga ttaaaaaaga aaaagcagag taatagctct   180
gctttaatat gtttctacag aaatatggcc taa                                213
```

<210> 441
<211> 246
<212> DNA
<213> B.fragilis

<400> 441

```
cggtggcgag aaacttctgt taataatttc tcttctttgc agtcttgttt tataaatgta    60
aatgagatca aggtacgttt tgggggtgct cccggtttag tgatgaccaa gagctggcgg   120
gatggataca ggccttgtga agatgcgatg tctttaaaag aatcacttgc atccatcggt   180
atgactactg taaaagtacc atttggcgaa agtaaattcg atactccctt cagcaactct   240
tcataa                                                              246
```

<210> 442
<211> 210

174

<212> DNA
<213> B.fragilis

<400> 442
agtaagcttt ttgcccgttt gcttacttta attcatctaa aagtcggtag ctccacccct   60
ttcagcttgc ttctgaaagg ggtgaaacta ccgactatgg tttgctacgc ttccggttta   120
ccggattctc aagaagtgca tgttagccaa aaggatgtat atgctgcatt cggtcggtat   180
ttacttcgat ttgctttcaa tgtggaatga   210

<210> 443
<211> 216
<212> DNA
<213> B.fragilis

<400> 443
tataaaatgg aattagagac aattggagaa aacgccggca aagtatggcg caccctgaat   60
gaaatgaggg gagaaatatc tattcaggaa cttagtcgga aaattaacct cagcgccgaa   120
gacgttgcac ttgcggtagg ttggttagcc agagaaaata atatttttat tcagagacac   180
aactacctgt tatacgtcag tcatgatgct ttctga   216

<210> 444
<211> 807
<212> DNA
<213> B.fragilis

<400> 444
atgaaaatgg aaaatagtgt attaaccgga aaaccttata acatcggata tgccttgagc   60
ggaggcttta ttaaaggctt tgcccatttg ggagttattc aggctttatt ggaacatgat   120
attaaaccgg atattatctc aggagtcagt gccggggctt tggccggagt attttatgcc   180
gatggcaacg aaccctatag ggttttggac tacttttccg gacataaatt tcaggacttg   240
acaaaacttg taattcctaa agtaggctta tttgctttgg gagagtttat tgattttttg   300
aagtcaaatc ttaaagctca gaagctggag gatttaaaac ttcctcttat cattactgcc   360
actgatctgg atcatggtcg cagcatgcat tttcataaag ggaatatagc tgaacgggta   420
gctgcttcat gctgtatgcc ggtgttattt acacctgtaa aaataggaaa tacacattat   480
gtggacggag gacttctgat gaatttacct gtatctacca tccgaaatga atgtgaaaaa   540
gtggtagcag tgaatgtcag cccgttgatg gcagaaaaat ataaaatgaa catcgttagc   600
attgccatgc gttcttatca ttttatgttt cgtgccaata cgtttccgga gcgagacaat   660
tgcgatttac taattgaacc ctacaaccta gagggttata gcaatactga acttgaaaag   720
gccgaagaga tttttgaaca aggctataac actgcttctg aggttctgga ccaactaatt   780
gaagagaaag gaaagatatg gaaataa   807

<210> 445
<211> 1221
<212> DNA
<213> B.fragilis

<400> 445
agggacgcgg acagtttaca acttttttgc caacactttt gttataattg gataataaac   60
ctattttatc caatgaaagt acacgaatat caggcaaagg agattttctc cacttacgga   120
atacctgtcg agaggcatgc tttatgccat acggcagatg gggctgtggc tgcttatcac   180
cgaatggggg taaaccgggt agccataaaa gcccaagtgc tgaccggcgg gcggggaaaa   240
gccggcggag taaagttggc caataatgat agagatgtct accaatacgc tcaaactatt   300
ttggagatga ctataaaagg ttatcccgtc accaagattc ttcttagtga ggctgtcaac   360
attgcagccg aatattacat cagtttttacg atagaccgta atacgcgctc tgtcacgctg   420
attatgagtg cggccggtgg tatggacatc gaggaagtag cccgccaatc tccggaaaag   480
ataatacgtt gcagcattga tcctctaatc ggagttcccg attatctggc acataagttt   540
gctttctctc tctttgaaca agctgagcaa gctaaccgga tggcaactat tattcaagat   600
ctttacaaag catttattga aaaagatgct tcacttgctg aaattaatcc attggtactt   660
accccctgttg ggacattatt ggctattgat gccaaaatgg tttttgatga taatgcactt   720

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tatcgtcatc cggacttaca gaagttatca gagcccacag aagatgagaa gttggaagcg     780
attgccaaag aaagaggatt cagctatgtg cgcatggacg gtgagatagg ctgtatggtt     840
aatggagccg gtctggctat gacaactatg gatatgatca agctttatgg aggaaatccg     900
gctaatttcc ttgatattgg cggtagttca aatcctgtca aggtgataga agctatgaga     960
ttattgctgg atgacaaaaa agtcaaagta gtctttatca atattttcgg aggtatcacc    1020
cgatgtgacg atgtagccat cggactctta caggcgtttg agcagataca aacggatatt    1080
cctattattg tgcggcttac aggcactaat ggaaatatgg gacgtgaatt attgcgtaag    1140
aataaccgtt ttcaagtggc ccagacaatg gaagaagcta ctaaaatggc tatagaatca    1200
ttaaagaaag aatcgatatg a                                               1221
```

<210> 446
<211> 1443
<212> DNA
<213> B.fragilis

<400> 446

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catcaaagtt tatttctaat gaagaagaaa caacctgagc cccaattatt tcaaaaagga      60
tatgaaactt atgcagtcac caaaggcgga aaaggaatca taaagttcag tgataatagc     120
gatatcacaa ctgaccggga gacctctacc gttgaagtag ttcccaaagg gaaagaggct     180
ccaattaagt ttgttcccag agggcggaat aacaacatga tgtatgacat tatgaagaag     240
atcggagcaa acgtaactgt cggcagcaat gtggaattca aaaacaaggt agtatatgga     300
gatagtgtcc tcgtatatcg taaataccgg gataaggaaa cccgaaaaat catcaaagaa     360
gaagtcttgc ccgaagaata cccggatata ttcgatttta tagaaaacaa cgacatacca     420
tttatccgga tggagatagc gaatgattta gtgatcttct acgatgcata cgtcgaatat     480
attttaatc aggacactca gcccagactg gtacaagtaa aggcaaagga agcaacctgt     540
tcacgtatta gcgtaatcga tgagaggacc ggcaagagtg aatatcatgg ttactcagcc     600
aaatggcatg aaggtatgcc ggatgatgta attgcgacgc cactactgga ccgccaggca     660
cctttgcggg atttaaagac acgaatgggt ttgtttccca atgaaaaggg aataaaagag     720
atcgtcaaag accgccgctt catccataac attcgtatag cgactcccgg acgattctat     780
tacagtaaac catattggtg gagtgtattc gtttccggat ggtacgactt tgggaatgcc     840
attcctatct ttaagaaggc tttgatcaag aatcaaatgg cattgcgcta tatcgtctac     900
atcaaagagg atttctgggg aaaattatat gcagatgaaa aaattacgaa cgaagcagac     960
caggctgtac ggcgagagac cttccttcag gacatgaatg actttcttgc cggagaagag    1020
aatgcaggta aaggcttcgt gtcccatttt cgttatgacc gagtaaaagg atttgaggat    1080
aaggatatca tcataaatac tttagattcc ttcttcaagg gtggcgaata cattgaagac    1140
agcgaggaag taagcaacac catctgctac ggcatgaatg tacatccctc catcattggt    1200
gccgctcccg gcaaaggtaa gagtattaac ggtactgaag cccgtgagct gttcatcatc    1260
gaacaagcct taatgaaaat gtttcaggaa gccacgctca ctccccttta ttttgccaaa    1320
gccgtaaacg gatggccgaa agatatctac ttttccgtca ccaactgtca gcttaccacg    1380
cttgacaaag ggacaggagc tactaaaaat acaggtttaa cctcagaaac agaagaaaaa    1440
tga                                                                  1443
```

<210> 447
<211> 645
<212> DNA
<213> B.fragilis

<400> 447

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tcaaacatac tgggaggatt aacgatggga tattataaaa gattaagtac ctatcgtgct      60
gaagtcaaac gctataacgc ctcccgccga aaagccacac agttgactaa tgccccggca     120
tccggactga tccgccttga aaccgtctca gaaaccgaac gcttttcaat ggctcaggat     180
gctgatagac tgactgcata taacaaggcc gttgaaaagt ggcaagatag tgtggcccga     240
caattacgag ccggaatagc cggccgcagt atgcgaatag cccgtgaact tgagccacgg     300
gcctacaccg acaaatacgg tattatcaac cgtcttggtt tctccttccc tcgacatgga     360
atctacatcc acaagggcgc cggcgaaggt cagggtggct tcatcggttc caaatggaat     420
tacctcaaaa aaattaatgg agttgagata gataccggta ttgtacgtca tacaaatctc     480
aaatcactcg gacgacagaa tgaaggcaac cgccgggcct acgaatggtt tgaccctgta     540
attcgtaacc ggatcaatga attagctgat atcgtcaccg attatttcga cactatgctg     600
attgatgcta ctcgaatata catagataaa cgaaacagtc tctaa                     645
```

<210> 448
<211> 2202
<212> DNA
<213> B.fragilis

<400> 448
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cacatgtcac tcaagataaa aaatcaatta ggaatattcg atcttcaaaa cgatttcagc      60
atcgagatcg aagacacctc ccctatttac aacgaacgtg gctcacaatc cgtaccggcc     120
acgcttcctg cctcccgaaa caacctttca ctgatcaccc atgtccatcg tccggatagt     180
acctactccc ctgccccgga tgcccgtgtc accgtctccg atggtgtcta caaccgaata     240
ggtaagatga acatcacaca ggcctccaaa tccggaggaa tcgtatccaa tataggtttt     300
gacgagtctg aactctactc ggaatggaat gctgtttcac tccgttccct ctctgctccg     360
gttattcgtc ccgaaggagg aacaaccggc gtcatcagcc tgctcaattc tattatgaat     420
gaaacaatcg tagacgatgc tctttccatt tttcccattt gtgtatccat tccatcacat     480
gcaacgaccg tggacgatac ggaaaccacc acctactacc ccgaatacat caacaagata     540
actaaattag agaatggtac ctactccctt cagggagctg ccagacagga aacattcctt     600
atcaataacg aacccgtcct tacttccgtt cccgaaggtt atgccatcag cccattttta     660
aaagtatctt ggatactcaa tttttatattc gtccggtacg gttatacggt ccttgaaaat     720
ccattctcaa cccaccgtca actctcccgt ctggtagttc tgaacaacat ggccgacagc     780
atagtcaagg gcttcattga ttactctgac cttctacccg attgcacgat taacgagttc     840
ctacaagccc tctactgtcg ctttggtatg gtgtatttttg ttgatggtaa aaataaaacc     900
gttaatctca aatttatcaa agatatcatc tcaactccgg cctcactgaa ctggtccctg     960
ctcaagtcgg cccggcctgc tatcaactat gccgctgcac agcaactcaa actttccgca    1020
tccaccaata tctccggtcc ttataccaat ttagtagcta ctcctactgc cgactcactc    1080
gacaaatttc ttaaaacctt tggccatgtc ttgtcaagta acacagcaaa aggatatctc    1140
acctattctt tatgggatgg attttattat gtccggaaca atctgaccgg agttcgtgaa    1200
gcccgcagct ctgacttctt ccctgggat aaaggggcaa acatcagtta tatggagata    1260
tcatctattg atgaatgcct gccgatgaaa ggttcttacc ccgatgacca accggtttgt    1320
cctgcctatc tcctgggaaa agtacacaaa tataccaata tttccagcgc cagcgtagaa    1380
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atcaacggac acacatttga tatctccatg accttactg gtgataatgg cctgttctcc    1560
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tcggatattg agataccgtt tactgtaccg actcaagaag attatgaagc caacaaagag    2040
ttcttcatca aagaaatcaa ttacagtttc gacctttact ataaggtccg ggttcccaat    2100
gggcagacat ctcaaggtga tatcatctgg aaagataaag aatacggagg cgtacactat    2160
gccattactt acgggctttc cgttaaagcg gaactgcttt ag                       2202
```

<210> 449
<211> 222
<212> DNA
<213> B.fragilis

<400> 449
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cagtttccac tactgccact ggccaggctt ataaatctaa tcttcattat tctcttcttt      60
ttaatgcaaa ttgccggcaa cttttatggc aaattgtcgg caaatataca taaaaaagga     120
aacaatcaga cgttagtttt cttctttta tcgatgaaat cagtgatttt tgcaaaaata     180
agcaaagcaa ttgctgcaac caaaccgatt gccgcaaagt aa                        222
```

<210> 450
<211> 450
<212> DNA

<213> B.fragilis

<400> 450

```
aaatataaac ttatgattta caaattttta tttcctctaa aaccagacag tgccggagca      60
tctctattct tgttgattct aagaatttcg tttggcctgt tgttgatgaa tcatggtata     120
caaaagtgga gcaattttca ggaactttcc atatcctttc ctgatccatt agggctgggt     180
tctccctct cttaggatt ggctgttttt gcagagttag catgttcaat ggcctttatt      240
ataggcttct tatatagatt ggctatgatt ccgatgattt ttactatggt aattgcattc     300
tttgttattc atgccaatga tgttttttgca atgaaagagc tggcgttagt atatctgatt    360
attttttgttt tgatgtatat tagtggtccc gggaaatatt cagttgatta tgtgatagga    420
cgacaactca aaacaaacg aaaattgtaa                                       450
```

<210> 451
<211> 240
<212> DNA
<213> B.fragilis

<400> 451

```
tttgagattt gtatgacgta caataccggt atctatctca actccattaa ttttttttgag      60
gtaattccat ttggaaccga tgaagccacc ctgaccttcg ccggcgccct tgtggatgta     120
gattccatgt cgagggaagg agaaaccaag acggttgata ataccgtatt tgtcggtgta     180
ggcccgtggc tcaagttcac gggctattcg catactgcgg ccggctattc cggctcgtaa     240
```

<210> 452
<211> 666
<212> DNA
<213> B.fragilis

<400> 452

```
ctcgtaactt gtataactga tagcttaaca aagatgaaaa aactactcac gaaaggacaa      60
atcgctatac tcgtcatttt ttctgtcttg attattgatc aggtcataaa gatttggatc     120
aaaactcata tgtattggca tgaaagtatt cgcattacgg actggtttta tatctatttc     180
actgaaaata atggtatggc gtttggaatg gagctttttg ggaaactctt tttaactaca     240
ttccgaatcg ttgcagtagg attaatagga tggtatctat acaaaatcgt aaaaagagga     300
ttaaagaccg gatatattat ctgtgtatca ttaattctaa ccggtgcatt gggtaatatc     360
atcgacagtg tattctatgg agtcatcttc aacgaaagta cacattcaca aatagccagt     420
ttcatgcctg atggcggcgg ttattctact tggttctatg gtaaagttgt cgatatgttc     480
tatttcccga tcattgatac caactggccg acatggatgc ctttttgtcgg aggagaacat     540
tttatttttct tcagtccgat ctttaatttt gcagatgccg ccattagttg cggaattatt     600
gccttattac tattctacag caaataccctg aatgattcat atcatcattc tgtgactaaa     660
aagtaa                                                                 666
```

<210> 453
<211> 1005
<212> DNA
<213> B.fragilis

<400> 453

```
ccgtatcatt gcaacaaaat aagtgcaatg agccaaaaac gcatcatctt atcagattca      60
tcactcaacc ggtacggcta ccggggttctt actgctggac ttcttcttga agctttcatt    120
gacaacccgg tgatgctgta tgggcatttc cgtgatgaag gatcaccct atggtgtgat      180
tacaaagcaa tcggatattg ggacgatatc aagatagagg acgacgtgct ttctgctatt     240
cctgttttcg acaaggtaga cgatttatcg aagaccattg ccgcaaaata cgaagcaggg     300
accttacggg ccgcaagtat tggtatacgt atcctggcca catcctccga aaaagaatat     360
ctgcttccgg gacaaacacg cgaaactgtt accaaagcag aagtcatgga ggcttccatc     420
gtggatatcc cggccaactc ccatgccgtg cgcttatacg accgttcctc ctccgtttta     480
ctggcagcgg gtatggacac gaatattgtg ccagcattaa caatcccaaa agaaaaggca     540
atgaattaca aaccatcatg gaccggcttc ctctctttcc tgggaatttc aaaagataaa     600
gcggaaacca ccgaactgtc tgctgaaaac ctggactcta tccatgctga aatggaacga     660
```

```
ttaaagacag agaacgctac tcttgtacag gctaagaccg atattgaaga gaaacttaac    720
tctgccaacg cgaagattac agagctgaac ggttctacat ccggcaagga taacgagatt    780
agtactctca agaactctat cactgagaag gattctaaaa tcacccaact tgaagagcaa    840
gtgaagaatc tgaagaacgg tcctacaccg gggcatgccg gtctgactcc tgaacaagag    900
cctgaaggta gcggaaccca ggaagagtta tctgcttttt gtgaccagaa cgcaggaaac    960
tatcaagcca tcaccgagaa attaaaagct gagggcctgt attaa                  1005
```

<210> 454
<211> 1407
<212> DNA
<213> B.fragilis

<400> 454
```
cttaaagaat gcacaatgaa gaaaagtaca aaatttatca tcgcattgct tgtgacagtc     60
gggggcactgg ctatcactta ccgcgttgta aaccaagcac cgtcgaaaga tcttgctgct    120
gatgctcaga tgcaggaaat cattacttcg ggggggatgtt tacaatgtca ttcgggcagt    180
ccggaccttc ctttctatgc caactggccc gttgcaagcg gaatggtaca gaaagacgta    240
acgcaaggtt atcgtgcttt cgacatgacc gaaatggctg aagctctgaa agccggtaag    300
cctgtcggaa aagtagcact tgctaaagtc gaaaaagtaa tcatggacgg aacgatgccc    360
aaacatgctt attacatggt acattgggga tcgagcgtaa cagatgccaa gaaggaaatg    420
gctatggcat gggttaaaca acatcgcttg gcacattatg ctaacggact ggctgccgcc    480
gagtttgcca atgaaccgat acgtcccatc gcagattcta ttcctgtgga tatgcgtaaa    540
gtcatcttgg gagatatgct ctatcatgac actcgccttt cggccgataa caccgtttca    600
tgtgcttcgt gtcacggatt gaataccggt ggtgtggaca ataagcaata ttcggaaggt    660
gtaggcggac agttcggagg cgtaaatgct ccgacagtgt ataacgccgc ttacaatttc    720
gtccagttct gggatggacg tgccggaaca cttccgagc aggctgccgg acctcctttg    780
aatccggtcg agatggcctg tcagtcattt gatgaaatca ttgcgaaact ggagcaggat    840
gcaaacttta ccaaagcctt tttggctgta tatcccgatg gttattccga acagaatatc    900
acgaatgcga tcgaggagtt tgaaaagaca ctgcttactc cgaattcccg tttcgacctt    960
tatctgaaag gtgaaaagac tgccattaac gatatagagc tggccggata cgaattgttt   1020
aagaaatacg attgtgctac atgtcatgtc ggtgagacac tgggcggcca gtcttacgaa   1080
ctgatgggcg taaagagaga ctacttcgca gatcgcggca ttgaattgac agaagaagat   1140
aacggacgtt tcaaacaaac ccggaacgaa cgtgacaaac atcgctttaa agtgcccggt   1200
ttgagaaaca ttgccctgac ggctccttac ttccatgacg gcagtatgaa aacaatgaaa   1260
gaggctgtag attacatggc caaatatcag atggatctga atcttccgga agatgaactg   1320
aataaaatcg ttgcttttct ggagacactg accggggagt acaaaggtaa gcccctgacc   1380
aacgataatc agaccaaagc attataa                                      1407
```

<210> 455
<211> 192
<212> DNA
<213> B.fragilis

<400> 455
```
gtgacgacgt gctcgcctcc cgcccccggt gaagacctag agaccggtgt tctgaagttg     60
acggactcac ctgccatcca gtcgtttcct aagcgtgtcg gtgtagtgga agatgttatg    120
ctttgtgctt tctcggcaac agtaacaccg tcacttgcac gggtcgcaac gactttaca    180
gactttaaat ag                                                       192
```

<210> 456
<211> 789
<212> DNA
<213> B.fragilis

<400> 456
```
atttctatcc gatttgtttt gtattctcaa atttgcaggt atatgaaaaa cagtgattta     60
actacttatg gggagtattt ggaaaagcta tccccaaaac acggacggga aaggtatttt    120
aatgactttc tgcaaatagt cgtttgttgc ctctcaatgg gacgtaagga agaactttat    180
ttcaaaacga taaagcccta tgacaaaaca gaactggatt tgttttcaca ggcttttgcc    240
```

```
gcacttgtta tgcagatgga caggcaacca ctggtagacc cgttcggaga ctattttcaa    300
gagttttaa gcaacgccca aaacgggcag tttttacac cgtttggggt atgtgaatta    360
atgaaccaat tgattacagc tcctaaagta aatgatcagc ctaaacaggg agatcggagg    420
gtattagacc ctgcatgcgg tagcggaaga ctcctttat cagcagccca aaaggataga    480
gcattgactt ttgtcgggat tgatatctca tatacctgct gtctcatgac tatcattaat    540
ttgtgtctga acagcttaaa cggagaagta ttacacatga atgccttgac ggatcaatgt    600
tggcatcgtt ggttgattat cgttgatagt gtaaccaaga taccgaccgt ttatgaagtg    660
gaagccggaa taataaacca accgcctgca tgtgcggatg atttaaagcc tttaccggtg    720
acagggatca tacagccggt aaagaacatg attcccgcca attttgtacg ttatacccct    780
aaatgttag                                                            789
```

```
<210> 457
<211> 366
<212> DNA
<213> B.fragilis
```

```
<400> 457
aggaacttac gtccgatacg ggtatccgaa ccgataccgc tacgcaccat atttacatca    60
gctcctacta actcacacag attagcgatg tcgttcatga aactgatacg agtagccaac   120
attgagtttg cggcatattt ggtcatttcg gcagagggaa tatccatgaa tatcacgcgg   180
aaattattta gcatgaatgg cttatatagc ttagtcatta attttctgc acgttccgat    240
tccacaccga ttacaacacg gtcaggactc ataaagtcat tgactgcatt accctctttc    300
agaaactcag gattggaagc tacatcaaat tctattttgg cacccgtttt gtctaattct    360
tcctga                                                                366
```

```
<210> 458
<211> 903
<212> DNA
<213> B.fragilis
```

```
<400> 458
aatggctata gaatcattaa agaaagaatc gatatgagca tacttattga taaatctacc    60
cgacttttgg tgcagggtat cacaggcagg gatggacttt ttcatgccaa aaagatggct   120
gaatacggaa caaatgtggt gggcggaaca tcacccggca aaggaggaac aatgatagac   180
gatacctttc cggtattcaa caccatgcat gaggctgttc gccgaacgca agccaataca   240
tctgttattt tcgtaccggc acgctttgct gccgatgcta ttatggaggc tgccgatgcc   300
ggtatccgac tgataatttg tatcacagaa ggaattccta cattggatgt aataaaggcc   360
taccggtttg tcgaactgaa gggagctaaa ctcattgggc cgaattgccc cggcctgatc   420
tctccggag aaagtctggt aggtattctt ccggggcaag tgttcactcc gggcaatata    480
ggagtaatca gccgtagcgg tacgttgacc tatgaaatcg tatcacatct gactgctaaa   540
ggtatgggac agtccactgc cattggtatg ggaggtgatc cggttgtcgg actttatttt   600
cgtgatcttt tgggaatgtt acaaaatgat ccgcaaactg atgctattgt gatgattggt   660
gagattgggg gtaacgcaga agagttggcc gcaacataca ttcgtgaaca tgtgactaaa   720
cctgtggtgg catttattgc agggagatct gccccgccgg gtaaacagat gggacatgcc   780
ggagctatta tatccggaag ttccggttct gcaaccgaaa agatttcagc attggaagct   840
gcaggaatca gagttgccgg tgaaccctcg gaaataccgg atttactgaa aggcagtttc   900
taa                                                                    903
```

```
<210> 459
<211> 1761
<212> DNA
<213> B.fragilis
```

```
<400> 459
tcgaagcggc ttatcaaagc catcgagata ataaaattgt caatcttaaa tagcatatat    60
aaaatgaaga acgaaaacaa aatgattatt tatcaagtgt ttacacgctt gtttggtaat   120
aataataatc actgtatcta caatggagat atttcacaaa acggttgtgg aaaaatggct   180
gattttactg ctaaagcttt gggagaaata aaaaaactgg gagcaacaca tatttggtac   240
acgggtatta tcgaacatgc cagccaaact gattatagaa gatacaacat ccgcccggat   300
```

```
catccggcta ttgtaaaagg taaagcggga tctccatacg ccattaaaga ttattatgat    360
gtagatccgg atctggctac tgatgtccct ggaagaatga aagaattcga aaatctagta    420
agccgtacac acagagcagg attaaaagta ataattgatt ttgttccgaa ccatgtagcg    480
cgtcaatacc attcggatgc acaacctgac ggcaccactc agctgggagc caatgatgat    540
cctaactact cttttagtcc gtacaataat ttctactata ttccgcaatc ggaattgcat    600
ggacagtttg atatgacggg aaatgccttg gaaccctatc atgaatttcc tgccaaagca    660
accggaaata accgttttga tgcttaccct aacattaatg actggtatga aaccgtaaag    720
ttaaattatg gtgtggatta tcagaatggt ggaacttgcc atttctcccc tactccggat    780
acttggacta aaatgttgga tatcctcctt ttttggtcct ctaaaaatat tgatggtttc    840
cgttgtgaca tggccgaaat ggttccggta gaattttggg aatgggctat ccctcaagtg    900
aaacaggagt atccgaatat tatatttatt gctgaagtat acaatccgca cgaatataag    960
aattatttat ttcgtggtaa atttgatttt ctctacgata aagtaggact gtatgataca   1020
ttgcgcaatg tagcttgtgg ttatgactct gcaactgcta ttactcgtag ttggcagtct   1080
ttagggggga ttgaaaagcg gatgcttaac ttccttgaaa accatgacga acaacgtatt   1140
gcatctgatt ttttttgccgg agatccacgc aaaggtgttc ctgccttaat tgtatctgct   1200
tgcatgaata ctaaccccat gatgatctac tttggtcagg aattcggaga aatgggaatg   1260
gatagtgaag gtttcagtgg acgtgatgga cgtactacta ttttcgatta ttggagtgta   1320
gatacaattc ggcgctggcg aaatgaagga aagtttgacg ggaagatgct aactgaagag   1380
caaaaacatt tatatgcaat ttatcagaga gttttgacgt tgtgcaatga agaacaggca   1440
atatcaaacg gcgtattctt tgatttgatg tatgctaatg aaaatggatg gagatttaat   1500
gagcacaagc aatatacatt tatgcgtaaa tacaaaaatg aattgctatt tattgtcgta   1560
aactttgata atcagccagt aaatgttgcg attaatgtgc cttctcatgc ctttgacttt   1620
ttacaaattc ctcaatttga ttcttataaa gcggttgatt tactaacaga taaagtagaa   1680
gaaatcagtt tactgccata taaggcaaca gaaatcgctt taggagctta tacgggtaaa   1740
atattgaaga ttaaatttta a                                             1761
```

```
<210> 460
<211> 195
<212> DNA
<213> B.fragilis
```

```
<400> 460
tgtaatataa gacgttttca tgacgacttt atgttaaata ctttgagtca atttataacc     60
tcaaacaaaa gggatggaac aaggtatatg ccttttgctt ttattgagtt gggcgtagct    120
atgctttcct ctattttaaa cagtgaagtt gtaattgaga ttaacaaaag attatatcga    180
agaagtgttt actga                                                     195
```

```
<210> 461
<211> 777
<212> DNA
<213> B.fragilis
```

```
<400> 461
tttcagtcaa gatccatgtg ttccgaaccc gatacctttg tgcaaacttt aaaaaatata     60
aaaatgaaaa aagttattat tataggagct acttccggaa tcggtaaagg attagcagag    120
cgctttctcc gggaaggaaa tacagttggt attacggggc gtagagaaga taaactacaa    180
gagatctgtt ctcaaaataa aaattgtttt tatagtgttt ccgatgttac caaagatacc    240
gatacagtcc gacaactgag caatcttgtg aacagagtgg gaggtatgga tatacttata    300
ttctgttcgg gaatagggga gctaaatcct gaacttgatt atcttctaga gaaaccgact    360
cttttaacca atgtaatagg atttaccaat gtagtggatt gggctttttca cttttttcag    420
aagcaagaat gggggcattt gattgtaatt tcatctgtag gcggaatgcg cggtgaagga    480
atagccccgg catacaatgc ctcgaaagcc tatcaaatca actataccga aggattaaga    540
aaaaaaacag ccaagctacc ttatcctatt tatatcactg atgtacgtcc cggatttgtc    600
gatacggcaa tggcaaaagg agagggggttg ttttggatta ctccgttgga taaagctgta    660
caacagattt atcgcgccat ccttcgaaga agaaaagttg cgtatgtttc gaagagatgg    720
aaatatgtag cattacttct gagaatgata cccgcctcga tttattgtaa aatgtga       777
```

```
<210> 462
<211> 1419
```

<212> DNA
<213> B.fragilis

<400> 462

```
aagcacaaaa gaatgaaaaa tttttatggat aaaaatttcc tgcttcaaac cgaaacggct        60
caggaattat atcataatca tgcggctaag atgcccatta ttgattatca ttgtcattta        120
aatccccaaa tggtagcgga tgattatcgg tttaagtcct taactgaaat atggctaggc        180
ggtgatcatt ataaatggcg tgccatgcgt tccaatggtg tggatgaatg cttttgtacc        240
ggtaaagaaa cgtcagattg ggagaaattt gagaaatggg cagaaacggt cccatatact        300
ttccgtaatc cactgtacca ctggacgcat ttggaactga aaactgcatt tggtattgat        360
aaagtactaa atccgaaaac agcacgtgaa atttatgatg aatgtaatga gaaactttct        420
tctcaggaat attctgcccg cggaatgatg cggcgttatc atgtggaaac cgtatgtaca        480
acggatgatc ctatcgattc attggaatat catattagaa ctcgcgaaag tggatttgaa        540
atcaagatgc ttcccacatg gcgtccggat aaagttatgg ctgtggaagt tccttcagat        600
tttcgcactt atatagaaaa attgtcagaa ataagtgaga ttactatttc tgactataat        660
gatatgatct tagctttacg taaacgtcac gactattttg cagagcaagg gtgtaagctg        720
tctgatcacg ggatcgaaga attttatgct gaggactata cggaaggtga gattaaaact        780
attttcaata aaatatacgg cggttcggaa ctgacaaaag aagaagtttt gaagtttaaa        840
tcggcaatgt taattgtgct cggtgaaatg gactgggaaa aaggatggac acaacaattt        900
cattacggtg ctattcggaa caataacagc cgaatgttca agctgttggg tcctgatacg        960
ggatttgatt caataggtga gtttgctacg gctaaagcca tgagtaaatt cctggatcgg       1020
ctgaattcaa aaggtaagtt gactaaaaca attctgtata atctgaatcc ttgtgcaaac       1080
gaagtaattg ccaccatgat aggtaatttt caagatggga gtatacctgg taagattcag       1140
ttcgggtcgg gatggtggtt ccttgatcag aaggatggaa tggaaaggca attaaatgct       1200
ctttctcttc ttggattatt gagccgcttt gtgggaatgt tgacggattc tcgttcgttc       1260
ctctcctatc ctcgtcatga atattttcgt cgtactttat gtaatttatt ggggtgtgat       1320
gtggaaaacg gtgagatacc tttatcggaa atggagcgtg tctgtcagat ggttgaagat       1380
atcagttatt ttaatgctaa aaactttttt cattttttaa                            1419
```

<210> 463
<211> 774
<212> DNA
<213> B.fragilis

<400> 463

```
tccgggggaa gggactctta ccttcccta cataaactaa acaattacct gattatgaaa         60
cgatttattc tttgcatttc atgcctgctt atctgctgcc tgttcttgct tccggaagta        120
caagcggcca ttccggatac cggaaactgg atcagccatc atcttctgac atcagacggt        180
ttaaccgttc tggctgccgg cccggcattt gccccgttaa aatggaatat cgggcaaaac        240
aacatgggag gttataaagg acggctgctc tttattccgt atgacgctcc ttcaaccgta        300
ccaatgattc cggcaaagcc tactacgaat gaggacctga ttaccgcttc aggatcattc        360
acttttccaa gcggcggaac ctatactcag ccgatttact tgtattccac aaaagggaaa        420
gtaggttata aagcggaaat tcaaggcgaa acggacggaa aatctttaa gcagacttta        480
gagttttct tcccccggcaa tactccggga atgcatgctt tcagtacact tgtcaagaac        540
actccggggt acttcgtctt cgaagattcc gacggccaac aattcctgat gggtaaaccg        600
ggcatgtatg ccgatgtatc accctccttt gatggtggta gctcgccgc cgatcagcgg        660
ggaactgcct atacagccac ttgtgacgca aatgaatcgg ctgttgtttt agggacacca        720
atcgacatgg aagtcattgc aggcctaaaa ccggctccaa gtccggagg ttaa              774
```

<210> 464
<211> 393
<212> DNA
<213> B.fragilis

<400> 464

```
attattatga gtttaaatga tcgtttacga attgttgtaa atgaattttt tcatgggaat         60
aaagcggctt ttgctcgagc cgcaaaaata tcggaccaaa gagcttatag ttgtttgtct        120
gttcggagta atacagaacc tccggctaga gttttggaga atttagctaa gtatctaccg        180
aatttaaacg cgacttggct tttaaccgga gagggagaaa tgattcaaga taaatccact        240
```

```
cctgagatgc cgataactct tgtttcggta aatgaatata aaagtcgatt gcagcaaatg    300
gaggtaagat tggaagctct aagggctcag gtggtattaa aagataaact actagccgga    360
ctactccgaa aagtagagaa caagactaaa tag                                 393
```

```
<210> 465
<211> 597
<212> DNA
<213> B.fragilis
```

```
<400> 465
aacaatatga gtccacgtaa attaatgttt tggttgtttg cctgtatctt tttagtttgt    60
gccctgcggg ccgggttatt gacaagtgct gatcaatata tctatcattt acgtaatatg    120
catgcttcta cttttgcata tcggtatgat gattttttgc catacctcc gattgttgct    180
atgttcgtgt aaaacttac aggagtaaag agccgtagta actggaaacg aatgctcgtc    240
tctactgcat tttcttatat attaatgggg gccatagtgc ttacaatgaa atcactggcg    300
ggggttcttc gtcccgacgg ttccgatttc ctttcattcc cttcggggca tacagctacg    360
gcttttacgg ctgccacact actgtataaa gaatatggtt tcaagacccc cctagcgggt    420
attgctacct tcttgccggc agttgtcacc ggattcacaa ggcagttgaa taatcgccat    480
tggctgagcg acgttttggc aggtgccatt atcggtatca tgatggtaga gttagcctat    540
tttcttaccg ataggctctt aatgaaaacc ggtgcacaga cttgttccaa atcataa      597
```

```
<210> 466
<211> 1599
<212> DNA
<213> B.fragilis
```

```
<400> 466
aagctgtccg gttataaaga taaagcttac ctttgcaatg tttttttaat acaagttact    60
atggattatc ctcataaaat caataaggta cagatccgta acctccagat tgaagattac    120
gctcaattat cccaatcgtt tacacgtgta tattcggacg gaagcgatgt gttctggaca    180
cacgagcaga ttgagaaact aattaaaatt ttccccgaag gacaaattgt tactgtggtc    240
gacgaaaaga tagtcggctg tgcactctct atcattgtag aatatgataa agtgaaaaac    300
gatcatacct atgcccaggt cacggggaag gagactttca atacccattc tccccaaggg    360
aatatcttat atggcatcga ggtctttatc catcccgaat atcgcgggtt acgactagct    420
cggcgcatgt acgaatatcg caaagaactt tgcgaaacgc tgaatctgaa agcgattatg    480
tttggcggtc gcatcccgaa ttaccataag tatgccgaca agatgcgtcc caaagagtac    540
atcgaccgtg ttcgtcagcg cgaaatctat gatccggtgc tcacttttca actctccaat    600
gattttcacg tacgcaaggt gatgaccaat tatttgccga acgatgaaga atcaaaacac    660
tacgcctgtc tcttgcagtg ggacaacatt tactatcagc cgcctacgca agaatatctg    720
gcccccaaaa caacggttcg tgtaggattg gtgcagtggc agatgcgtag ttataagacc    780
ttggacgatc tcttcgaaca ggtagaattt tttgtagatg cggtatccga ctataagagt    840
gattttgtgc ttttccccga atactttaat gcaccgttga tgtcaaagta caatgacaaa    900
ggcgaatcac aggccatccg cgggctggcc caatataccg aagaaatccg cgatcgcttc    960
attaatctgg caatcagcta aacatcaat atcatcacag gaagtatgcc gttgatcaaa    1020
gaagacggat tgctgtacaa tgccggattt ctttgccgac gcgacggaac ttacgaaatg    1080
tacgaaaagc tccatgtcac cccggacgag ataaagagtt ggggactgag cggcggcaaa    1140
cagcttaaaa cattcgatac ggactgtgca aagataggca tactgatctg ttatgatgtg    1200
gaatttccgg aactctcccg tctgatggcc gaccaaggaa tgcagattct gtttgtaccg    1260
tttctcaccg atacacaaaa tgcttattcg cgtgttcggg tctgcgcaca ggcacgtgcc    1320
attgagaacg aatgctttgt ggtaatagcc ggcagtgtag gcaatcttcc ccgtgtgcac    1380
aatatggata ttcaatatgc tcagtcggga gtattcacac cttgcgattt cgcttttccg    1440
acagacggaa agcgtgccga agcaactccg aatacagaaa tgatcctggt ttcggatgta    1500
gatctcgact tattgaacga actacacact tacggcagcg ttcgcaacct gaaggacagg    1560
cgaaatgatg tatatgaagt gcgcttcaag aagccttaa                          1599
```

```
<210> 467
<211> 420
<212> DNA
<213> B.fragilis
```

<400> 467

```
aaattgttgg gaaattacag agatcaaatt atgaatcgta atgccattct aagtaaacgt      60
caaaaacagt tcatcgaacg tattgcctgg ggagcttctt ataaagaagt agctgatttc     120
ttccatgtga gttggagcac tgttgacaat actctccgaa atgcaaaaac aaaattaggt     180
ttaagtaaag tgactgagtt gggggcatgg tggttctgca ctaattacgg aattagtttt     240
gatctatctc ctattgccag gcaatgtaca gcaggagtta tcttactctt gttttccctt     300
ggagaagtga caacagtaac aaatatatca tataccatgc aaagagtaag aagaccacgt     360
acagagtatc gcatccgtcg acacgaaact tctatatatc aaccatatat tattaactaa     420
```

<210> 468
<211> 1293
<212> DNA
<213> B.fragilis

<400> 468

```
gtttttcagg gaggtatcct attctttctt cttctgtata gatgcaacag ggaaataatt      60
tcattcttta tcaaacttat tatgaataat tggaagaaaa agtttatcat tatatggaca     120
gggcaactat tctctatact aagtagttct attgcccagt tttctattgt tttgtggatt     180
agtcttaaaa cgggatctgc ggaggtattg tcatttgcaa ctatcgctgc tttattacca     240
caagctttat taggcccttt tgccggcgtc tttgtcgatc gttggaatcg caaatggact     300
atgattggtg ctgacagctt tgtcgctctc tgttccggag tgatcgcttt actgttctat     360
ttggatataa tcgaattatg gcatatatat cttttactta tgttgcgttc ggttggcggt     420
gcatttcata cgcctgccat gaaatcctct gtaccattgt tggcaccgga aaaagagctt     480
atgcgcattg cgggtatcaa tcaagctatc cagtcgattt gtaacattgg tggtccggct     540
cttggagcca tattgcttct tgcgtttgac atgagtcttg tcatgcttct agatgtattg     600
ggagctataa tagcttgtac agctttactt tttgtgtata ttcccaatcc taaacaagaa     660
aatacctcag ctaaaaatgt actttatgat atgcgagatg gatttaatgt aattatgcgt     720
aataaaggag tcagttgggt aatggtaact gaagttctgg ttacattttt tgttatgcca     780
atggtggcat tgatgccgtt gatgactttg aaaaatttct cgggaacagc atatcaagta     840
agtttgatag aaactctttt cggtgctggc atgttggccg gtggtgcctt attgggtgta     900
tggaatccaa agatacgtaa aaccttgctg attgctattt cctatttttt gcttggtgcg     960
gcattggcat tttgtggaat acttccggct gatggttttg tacttttttgc agcattaact    1020
gtggcacaag gtatagttgt cccattttttt tccgggcctt ttacttcatt actgcaaact    1080
cagtttaaac cggcatattt aggacgtgtg ttttctcttt ttgacagcgt gagcttattg    1140
ccttctatca ttgggttgtt cattaccgga tttattgctg atagtttagg aatagccaat    1200
attttttatct gttgtgggat agcaattgta tttacctcaa ttttgatgat gtgcattccg    1260
gctgtcagag atctggaaaa gcaaagtaaa tag                                   1293
```

<210> 469
<211> 396
<212> DNA
<213> B.fragilis

<400> 469

```
gagtatatta tcccaattta ttaccctata aagatacgtc ttttatttga tatacacaac      60
attataatga taaaaaaaga gaataaaata ttcgtagtca tatctcctga tcccgtcgag     120
cgtgagcagt tgatcgcacg cctggccgtt cgtttaggtt ttgccaagat tccgtccgat     180
gcactcaaga tcataagcaa ggacatttat tcctttgacc tggcaactgc atattttgtg     240
ctttgcagta actatcattt ccggggttct atcgtcacaa cacaacggct gtatgagctt     300
gcagcaagag gtatatgtgt ttgtgtaggt gtgaagtcac tgccccgtga gtacgagttg     360
ttatctcagg tgttttatcc gaatgatttg cgatag                                396
```

<210> 470
<211> 1296
<212> DNA
<213> B.fragilis

<400> 470

```
actttaacta ttaaaaagtc tattcaaatg gctgcaaata aactaattga tgtctctaaa    60
ctgaacgaag cactggtcat ttatgaccag gcacttcgtg cgctgccgtt tgccaccctc   120
accgaagtgg caaacctact gaagctgaat gttatggacc tgcaaggcaa acacgcacgt   180
atcaacgagc gtcgtcgtgc cggtggtacg caatcgtata aaatcggaaa gaacttcgga   240
ctggtcgata aactcttagg ttacgaaccc tcagtcatcg agccgaaaga tgttgtctgc   300
atcaccaaag aaaactccca gaagtacgat gataacgaac tgctgatcat cggtggcact   360
ccggtaagca acactacaaa aaaacatccg atggaaacca aggttgcatt taccctggta   420
cgttcgcatc tggaagatat cgtatatagc ctgttctctg ccgaacggga tgaagattcc   480
aactcacccg gcggggcttt cgatggtatt tataccaaga tggacatgct gatcactcgt   540
ggcgatgtaa atgcggcccg tggtaatttc tctatttccg gagagtttgc cgcgccaaca   600
tcagatacag attatacagc ttacgagaat ctggtggaat ggatcggagg cgcaaacacc   660
taccttcgtt cttcaatagg cggtgtacca cagcttttgt gtgctgaaac cgtttttgaaa  720
gctgcccgtt cagcattacg taataagtta cgcatgcagg aatatccttc catgcaacgc   780
atgcttgaac tcttgcggga agacgccatg tgtccgaacc tgattgtctc ctcccacgaa   840
gctttaggcc aaggttccag gctgaccctt cagaaagttg gtaacataga cgtggcgttc   900
aatactcaag cggcttctaa attctgccag atacgtgata tttacgagga cccgaacgaa   960
tggcagttct ggttgcaggc aggatacgat acacgtatca atgactggca tgagaaagtc  1020
ttccgctgta acgagcagaa gaacgaatct ctcgacctgg ccggcgacta ttgtaaaacc  1080
ggtggagtac aggtagccat caccggcacc gacaaaggcc aatggagtat ccagggaaaa  1140
gttgccaaac gcggtaacgg ccaatgcatc attggacttc ctccgggaaa atacaccatc  1200
gagttcactg atgccgatgg caagaccaaa ccggcaaata cacaggttac agttgttgcc  1260
ggtgaagtag ccaccgctac cggagcctat acttaa                            1296
```

```
<210> 471
<211> 348
<212> DNA
<213> B.fragilis
```

```
<400> 471
gttctttata ttatggaaca attgttcgaa gctatcctcg cgatagcaaa gcagaacccc    60
gatgggttca cggttgacct cacaacctta aaaaaggtca caaagggtat ttcagtcgcc   120
tatctcgaga ctcaagacag tttcggagaa gaaggactga aaagagttct taaccatgct   180
gagatgcacg aaaagaaggt cggtggatgg ctgaatgaag agaaccaaga gttctatttt   240
gattccgtcc ggattttcac caaccttgaa gaagccaagc gattcgggtg tgaaaataaa   300
cagatcgcta ttttcgacat ctctcatatg agactcatca aattgtga                348
```

```
<210> 472
<211> 768
<212> DNA
<213> B.fragilis
```

```
<400> 472
tatctctata tttgcagcaa tcaaagactc aatattatgc atgacatacc caaacaaatc    60
ccattggcaa acaatcacat ctcagtggac tgtgtagtga tcggttttga cggagaacag   120
ctcaaggttc tgctgattaa tcggatagga gaggaaaacg gaaaagttta tcgtgacatg   180
aaacttcccg gaagtctgat ctatatggat gaagacctgg acgaagcagc ccagcgggtc   240
ttattcgaac tgaccggtat ccgaaacgtc aacctgatgc aatttaaggc attcggttcc   300
aaaaaccgga cgagcaatcc caaagatgta cattggttgg aacgggctat gcaatcgaaa   360
gtggaacgca tagtcaccat agcttatctg tcgatggtaa agatagaccg ggcactggac   420
aagaatctgg atgaatttca agcctgttgg gtagcgttga aagacataaa gacattggct   480
ttcgaccata acttgataat cagagaggcg ctgacttata tccggcaatt cgtagagttt   540
aatccttcga tgctattcga cttgttgccg cgtaagttca ccgcatctca gttacgaatc   600
ctgttcgaac tggtatatga caaagcagtg gatgtgcgta acttccataa aaagatagct   660
ctgatggact acgttgtacc gctggaagag aaacaaaccg gagtagccca tcgggcagcc   720
cgttattata agttcgacag gaagatatat aataagacaa gacgataa                768
```

```
<210> 473
<211> 2322
<212> DNA
```

<213> B.fragilis

<400> 473
```
aaaccgtata tgaagaaagg gattctttac acgattcttc tttatcttgc tttgtcactg    60
gcttcgtgct ctgccactaa gtttgtaccg gatggctctt atctattgga tgaggtaaaa   120
atacatactg acaacaaaga aataaaacct tcggacatgc gactttatgt tcgccagaat   180
cctaattcta aatggttcag taccatcaaa acccagctat atgtatataa ttggtccgga   240
cgggattcta caaaatggtt caatcgattc ctgcgtaaaa taggagatgc tccggtaata   300
tacaatgaat ccgacgctat acgctcgcaa gaagaaattg ctaaagcagt gcaaaattta   360
ggatatatgg gagctagcgt aaaaagaact acaaaaacga aaagaaaaa gctaaaatta    420
ttttatgaaa tcacttcagg caaaccttat attgtacgta cactgaaata tgatatttct   480
gataagaaaa tagcagaata tcttcggaat gattctaccc aatcaatgtt aagagaagga   540
atgcttttcg atgtaaatgt acttgatgcg gaacgacagc gcattacaga ctatctatta   600
tgtaacggtt attataaatt taataaggat tacattactt atacagctga cactgcccgc   660
aatacccatc aggtggatct cactttacac ttattacctt ataaaactta tgtcggagat   720
actcctaaag agcattttca gtataagatt aacaaaatca atttcattac cgattatgat   780
gttctgcaat cgtcagcttt gagtagcatt gagatcaacg attccttgca ttataacgga   840
tttccgatct actataaaga caagctatat ttacgtccca aagtgttagt ggataacctg   900
agatttgcat ccggagattt atatgacgaa cgtaatgtac agaagactta acttactttt    960
ggacgactat cggcgctcaa atatactaat attcgttttt tcgaaactca aaatggcgat   1020
agcacccaat taaattgtta tgtcatgcta actaaaagca agcataaatc tatctctttt   1080
gaactggaag gcactaattc tgcaggagat ttgggagctg ccgcatctgt ttcttttcaa   1140
catagaaatt tattccgcgg ctcggaaacc ttcatggtaa agtttcgtgg agcatacgag   1200
gctatttcgg gattacaacc gggttataaa aaccataact atactgaata cggagtcgaa   1260
acaagcatta atttccccaa tttcttgttt ccttttctca cgtctgactt aaaacgacga   1320
ataaaagcaa ctacagaatt cggcttgcaa tataattatc aattacgtcc ggagttctca   1380
cgtaccattg cctcggcttc gtggagctat aaatggatac aaaaacagaa aatacagcat   1440
cgcatcgatt tgttggatat cagttatctc tatctgcctt ggatttcgtc tcaattccag   1500
gaagattata ttaataagga taaagataat tatattctca aatataatta tgaaaatcgt   1560
ttgattgtac gtatgggata caattatagc tataatagtg cgggtggaac tcttgtcaat   1620
aatacaatta caactaattc ttattctata cgggcaggct tcgaatcagc aggtaatatt   1680
ctttacggaa tttcgaaaat gattaatatg agaaaaaata aagatggcga atatgctatt   1740
ttaggtatac catatgcaca atatttaaaa ggagattttg attttgccaa aaatattatt   1800
attgaccatc gtaattctct tgcatttcat gccggaatag gaatcgctgt tccttatgga   1860
aatgccaaag tagttccttt tgaaaaaaga tatttttcag gaggagcaaa cagtgttaga   1920
ggatggtccg tacgcaattt aggaccgggt tcctttgccg gagatgggaa tttcatgaat   1980
caatccggag atattaaact ggatgcaagt atcgaatacc gtactcgtct attctggaag   2040
tttcgtggag cagcatttat cgatgcagga aatatatgga ctattcgcga atatgaaaat   2100
cagccgggtg gtgttttttga atttgataag ttttataagc agattgccgt tgcttatgga   2160
ttagggctca gacttgactt agactttttt gtacttcgct ttgatggggg gatgaaagct   2220
ataaatccta aatataaaaa agcaaaagag cgctatccta ttattcatcc tagattcagc   2280
cgcgatttcg cattccattt tgcagtaggc tatccattct ag                      2322
```

<210> 474
<211> 267
<212> DNA
<213> B.fragilis

<400> 474
```
cactatcgta ttatgccaag cgacagaata catcaaagta aagtctggga acttatggag    60
caacggaaag agggtaaacc cattgagttc tccattgaat tctgcaaaaa aagtaccggt   120
gaactcatta cctacgagcg tgcggtactt agttcatttc atagtagcgg aagcactgtc   180
aacatacttc aaataggtga gtatgctccc aggaaaatcc ggagatgtct aattacacga   240
tttaataaca tcaaagttta tttctaa                                        267
```

<210> 475
<211> 1530
<212> DNA
<213> B.fragilis

<400> 475

```
tatctactca ttataagtcc gtatttcacg gtctgcaggc tcttgttgcc tgcagaccgt      60
aattcaaaaa aagctaatgc catgaatcat accaacgagg gtagcaagct ctacctgtat     120
tccattacat cggtagccat cctgggcgga ttgctgttcg gctatgatac cgctgtaatt     180
tcaggagctg agaaagggct cgaagccttc ttcctcacag ccacagattt tcaatacgac     240
aaagtgatgc acggcatcac ctcctcgagt gcactgatcg gttgcgtctt gggtggtgca     300
ttgtccggca tcttcgcttc acggctggga cgccgcaact cactacggct ggccgccgta     360
cttttcttcc tttcggcact ggggtcttat tatcctgaat tcctgttctt tgaatatggg     420
aaggctaata tgaacctgct tatcaccttt aatctctacc gcattctggg aggcatcgga     480
gtgggactgg cgtccgctgt ttgtcccatg tatattgccg agatagctcc ctccaacatt     540
cgcggtacac tggtgtcatg caatcagttt gccataatct cggcatgct tgtggtttac     600
tttgtaaact acctgatctt gggcgaccac cagaatcctg ttatcctgaa agatgctgcc     660
ggcacacttt ctgtaagtag cgagtcggat atgtggaccg ttaccgaagg gtggcgctat     720
atgttcggtt ccgaagcctt tccggcagct ttcttcggca tgttactctt cttcgtaccc     780
aaaactcccc gttatctggt gatgattgat caggatcaga aggcttattc cattctcaaa     840
aaagtgaatg gagccacaaa agcacaagag attcttgccg aaataaaagc cacttcgcag     900
gaaaagacag agaagctgtt cacctacggt gcggcggtga ttgttatcgg tattctgctt     960
tctgtcttcc agcaagccat cggcatcaac gccgtgctct attatgcgcc gcgaatattc    1020
gaaaatgccg gtgccgaagg cggaggaatg atgcaaaccg tcatcatggg cattgtcaat    1080
atcgtcttta cactgatagc tattttcacc gtcgaccgtt cggacggaa accgttgctt    1140
atcatcggtt ccgtcggtat ggctgtcgga gcctttgcag tcgccttgtg tgacagtatg    1200
ggtatcaagg ggatacttcc cgtactgtcg gtcattgtat atgcagcttt cttcatgatg    1260
tcatggggac ccatctgttg ggtactgata tccgaaatct ttcccaacac catccgtggc    1320
aaagcggtgg ccattgctgt ggcatttcaa tggatattca actacattgt ttcatctacg    1380
ttccccgcac tctatgattt cagtccgatg tttgcctaca gtctttacgg aatcatttgt    1440
gtgattgccg ccctcttcgt atggcgttgg gtgccggaaa ccaaaggaaa aacattggag    1500
gatatgagca aactttggaa gaggcgttaa                                     1530
```

<210> 476
<211> 591
<212> DNA
<213> B.fragilis

<400> 476

```
aattatgtca tggatgaaga agtgaaaggt tttaatagat atatgtcaaa ggttgacttt      60
caacctgtca cagaatttat atttcaaaat ggacagttga cagattataa aaagggagag     120
ttttttagcc gtcaaaatga atcttgcaaa atggtaggct acgtgacgga aggctccttt     180
cgttattgct gtaccgacag ccgtggagga agtaagattg tcggttatac gtttgatcac     240
tcttttgtgg gaaattatcc tgcttttcgt ctgggagaca attctaatgt cgatatacaa     300
gctatttgta attgttcggt ttatgtaatc aataacaggc aattggagga gttttacagt     360
cgaaatgaag caaatcaaaa gttaggtagg caaatagcag agatattgct ttgggaagta     420
tatgagcgga tgatctcttt atatagtatg actcctgaag aacgctatac ggaaatctta     480
aaacgctgtc ccgaattgtt gaacttgatc tcgctaaaag aattggcatc ctatctgatg     540
atctgtccgg aaacgctgag tcgtcttcga agaaaattag tacaaaagta a              591
```

<210> 477
<211> 204
<212> DNA
<213> B.fragilis

<400> 477

```
gacctacgca tggcctaccg atggcaaata atgaaaaatg aaactgcttt ttcaatggct      60
ggtatttatg atattggggt agataaggaa tcaggcaagc agcatgctac gttttccatc     120
ataacaattg ttacggatcc actgacagat tatatacata acactaaata tcggatgccg     180
gttatttttg ttatccaaag atga                                           204
```

<210> 478
<211> 960

<212> DNA
<213> B.fragilis

<400> 478

```
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ttgcaaactc tggcaggcaa tttcccctta tctttttttg cattccctct gaatgtgatt    180
gtagcagtta tatggattta ttcgttatgg cgtctctata aagaagggaa taagttgcca    240
ttaacccgtt ttctgttatc ttcccgaaca agtgttctat cgatcctatt attaataggt    300
ggcagtctgg ttatcggttt gtttcctcag ttatcggaag cagaagcaga ttccatgcca    360
ggggttttag cttcgttggg atgctataat ttcatgactt cctggatatt cattgccatt    420
cttttccttt tattgagtaa tttggcaatg gtgattattc atgcttttta tcattgtgtg    480
ccggcaaaga agcgttttat cctgaaccat ttgggattat ggctcgcttt atttgccgga    540
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cgcgaagctt atagtatgga tgggaaagcc tattatctgg attatgaact ggaactctat    660
tctttcaata cagaatatta tccgaacggg atgccttcgc gtttttgctgc agatgtgcgt    720
attggaaacc ggagaactac acttgaagta aatcacccccc actgttaccg tttgggagaa    780
gacatttacc tgaccggata tgatacacgc aacatgggaa atacccggta ttgtatcctt    840
caaatagttc gtcaaccttg gaaatatgtt atggtagttg gcattttgat gatgttgaca    900
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```

<210> 479
<211> 360
<212> DNA
<213> B.fragilis

<400> 479

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aatcaaaaat ttcctattgg aagcaaagtt tgtattacta cccctgcaca tgaaggatgg    180
gcattgagta cccgcgaaaa aataacgttc ccagaaagaa aaagatattc ttatgtaact    240
gggtatgaaa tatgtcataa tgaggtagtg cccattctga tgaaagctaa gaaggatggt    300
actatttcaa aaattcggga ttatataaca ttagaaagag tgatagttga actggcgtaa    360
```

<210> 480
<211> 216
<212> DNA
<213> B.fragilis

<400> 480

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ttcccgccaa ttttgtacgt tataccccta aatgttagta atatggagaa agttttgcaa     60
tgtgtcagac ttccgcaaaa tggtaaagga acaatcgggt ttaatttgaa aggagagtat    120
ttaaaaaaat acggtttcca gttaggagat aaagtaaagg tagaaatcag caaaaataag    180
attgttttat ttaagacggg taatgtgctg gaatga                              216
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<210> 481
<211> 3450
<212> DNA
<213> B.fragilis

<400> 481

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tatagtaaaa ttgtaaatat agccatgagc aagaaatttg ccgaatattc gcagttcgac     60
ctttcgaagg tgaataagga cgtgttgaaa aaatgggacg aaaaccaagt tttcgccaag    120
agtatgacag aacgtgaagg ctgtccttcg tttgtatttt ttgaaggacc tccatcagct    180
aacggtatgc cgggtattca ccacgtaatg gctcgttcta tcaaagatat tttctgtcgt    240
tacaaaacga tgaagggcta tcaggtgaaa cgtaaagccg gttgggacac acacggactt    300
cctgttgagt tggggggttga aaagtctttg ggaatcacaa aagaggatat aggaaaaaca    360
atttcagtag ccgaatacaa tgctcactgt cgtcaggatg tgatgaagtt tacaaaggaa    420
tgggaagacc tgactcacaa aatgggctat tgggtggata tgaagcatcc atacattaca    480
```

```
tatgataatc gttacatcga aaccttgtgg tggttgctaa aacaattgta taaaaaagga    540
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tcacacgaac tgaatcaacc gggatgttat cgggacgtga aagatacaac agtagtggca    660
caattcaaaa tgaagaaccc caaaccggaa atggcacaat ggggcactcc ttatttcctg    720
gcatggacca ctactccatg gacattacct tcaaataccg cactctgtgt cggccctaaa    780
attgattatg tagcagttca atcatataac gcatatacag gacaacccat cacggtggta    840
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gattataagg caggtgataa gttggttcct ttcaaagtga tagctgaata taaaggtcct    960
gatttagtag gcatggaata cgagcaatta attccgtggg taaatccggg cgaaggtgct   1020
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gcacctacat ttggtgctga tgacgcccaa gtagcaaaag ctgccggcat acctccgcta   1140
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aagcatgtgc ataattatcc ccattgctgg cgtacagata aaccggtact atattatccg   1440
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ctgaatgact ggaacttaag ccgttctcgt tattggggta ctccattacc gatttggcga   1620
acagaagata acagtgacga aaaatgtatc gagtcggttg aagagctata taatgaaata   1680
gaaaaatcag tcgctgcagg atatatgcag tcgaatcctt ataaagataa aggtttcgta   1740
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gatattatcc ttgtctcaaa ggacgggaag ccgatgaaac gtgaagcaga cttgatcgac   1860
gtatggtttg attcgggcgc aatgccgtat gcccagattc attatccatt tgaaaataaa   1920
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aagtgtgact tcaaaaaact aggaccaaaa tttggaaaac aaatgaaagc tgtagcagct   3000
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acatccctta ctttagcaga tgaagtaaaa gacggaacag aattgaattt cgacgacttc   3420
tctttgtttg tgaatgtagt gaaagaataa                                     3450
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aggggaaaaa tttccccttt atccgtcgga agaccacgca ccgccctcgg aaaaagtttc     60
gcctcaaact tttttttctc tcttatatgc tgcccccctc ctcaaaaatc atcgcacatg    120
```

```
cgataccgct ccggcacatt gtgccgtttt tctgtccttt acgtaagcgc ttgtacacaa    180
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ggcggcggtt tagtcggaac cgccacagca tttgtcacta tcaaatacac caagaaacgt    300
gcagaagctg atgcaatgaa agcgatgcag gatgtctacc aggaaatgat caccgatcaa    360
agaagttaca tcaactcact caaacaggat aaagaagata gtgaggcacg ctgggaaaat    420
aaagttgaaa cattatccaa acgtattgag actatggatt tgaaaatcaa cgaaaacaat    480
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caatga                                                              546
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<210> 483
<211> 1275
<212> DNA
<213> B.fragilis

<400> 483
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tccgtaacag agatattggc aaaatacgat gccactatcc tggatattgg tcaggcagat    180
attcataaca cccttttcact gggcattctc tgtatgactg aggaacaact ctcgggattt    240
atgatgaaag agttgctttt taaggcatct tccttgggag taaccattcg tttctatccg    300
attaccgaag aagagtatga aagctgggtg aatatgcaag gtaagaaccg ctatatcctt    360
acattgctgg gacgtaaact tacggctcgc cagattgcag cggttacccg tattttagct    420
gaacaggaca tgaatattga tgccatcaaa cgtctgaccg gacgtattcc attggatgag    480
cgtaaaatgc atacccgagc ctgtattgaa ttctcggttc gcggtactcc ccgggataaa    540
gaagctatgc agggacagtt gatgaaattg gccagtgaac ttgaaatgga cttctctttc    600
cagttggata atatgtatcg ccgtatgcgt cgcctgatct gtttcgatat ggactctaca    660
ttaatagaaa ccgaagtaat tgacgaactt gctatacgtg ccggtgtagg tgctgaagta    720
aaagcaatta cggaacgtgc catgagggga gaaattgact ttacggaaag ttttcgtgag    780
cgggttgcac tgctgaaagg actggacgaa tctgtaatgc aggaaattgc cgagagtctg    840
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gctatccttt cgggaggttt cacctacttt ggacagtatt tgcagaagaa atacggtgtt    960
gattatgtat atgccaatga acttgagatt gtagacggca agctgacggg gcgttatttg   1020
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ggagttgccg gtcttggcat tgcctttcat gcaaaaccca agttgtggc caatgccaaa   1200
caatctatta atacgattgg gcttgatggc gtactttact tcctgggatt taaggactct   1260
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<210> 484
<211> 237
<212> DNA
<213> B.fragilis

<400> 484
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aaaggaaata gaatattctc ccggctacct tcgggaatgg ctacgcataa agggtatacg    120
gctccctcaa tttatcagtt gtgtaacatt tataataaga cggaattgga ggtactttgt    180
tccgcttcgg ctcatgtttt aactgtttat tttcatattt acctaattat ccaatga       237
```

<210> 485
<211> 1062
<212> DNA
<213> B.fragilis

<400> 485
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ctagtagcag gtccggtagt ttttcatta ggtatgattt gcattgcatt atttgcaaca    180
gccgctacta ttatccggca aatcatacat acatacgggc gaggttcttt atatgcattg    240
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cctattatcg gttatctggc tgctgttgtc acaattattg gcggaatttg catgtttacc    300
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actacttgta tagcaaccgc agcaacatct tctacccgtt tttcattgat tcctgccaac    420
tcaaaaatga ttggtaacgg tattcctgaa ggagcgttta ccaagggcca agagcgtata    480
ttaaaaacaa tagctatcac tatatcgttg attgcctgga tctgggcttt cgttttatta    540
gccaagagtg atgtacatcc tgcttatttc gtagcagggc atgtgatggt aggtttagct    600
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tatacggata gagaacgtaa aagatggcca aaactcgtat tgttgatggg aaccgtttcg    720
cttctttggg gactgtttgt tatttttttcc gattcaagca ctactaacgg agtaatcgga    780
tacatcatga ttgggcttgg gctggtttgt tacagcattt caagtaaagt aattctgctg    840
gcgaaaattt ggggaagaga atttgctttg gccaaccgca tcccttttgat tccggtattg    900
acggcgttgg cctgtttgtt tctggcttct ttcgtttttg aattgggtac gacgcatgat    960
gattattta tccctgcacg cgtattagcc ggtttgggtg ccatttgctt cactctcttt   1020
tcaattgtca gtattcttga gagtggaaca tcttcaaaat aa                      1062
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<210> 486
<211> 4932
<212> DNA
<213> B.fragilis
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<400> 486
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tctaaccggc atgtggcaga agtgctatac tggttgaatg aaggattaaa gaaagtttct    180
actgatggtt taaaagatat ctttatcagt aaaaagcaga tagacgaaac caatttttta    240
cttcgtcttc tgggaggtgt cgaatttagc agcggggatg atccctacag aatcacgcaa    300
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accgaaagag tttggaaact gaacggtaat atgctgatct caggtaacat tactttcggt    420
tgggacaatg gaacatacac cgcaccaact cttctcgacc tgctccctta cgacccgact    480
accctgtcaa aagagggcgg ccgactgtct gtgatcaatg ccggttctga cttttgatgaa    540
ttggccatgt ggggcgtcct cagtaaagaa ggtgttcagc agatcgacaa gtcacatttg    600
tccggtgctc ttgccggata tgcgacagag aaatttgtca cagataaagg ctatatcact    660
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agtgccggtt caagcttcga cgaatcctcc atgtggaccg cgctcttgaa aagtggttct   1020
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cctaatggaa ccgcatcaca atttctcaaa gctgatggta gtctggattc caaccctttat   1920
gcattagcgt atggtggtga ccaaaacagt attcagtatt caagtaaatc taattactta   1980
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actaataata gattatatta tagggatggc aaaggttctt cttgggctac tgattggaaa   2220
ggtatagctt ttcttgaaga ttgtaataaa gttgcaactc cttactttga gggacaaaat   2280
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gaatataatt atgcaagcgg tactatgttt tacagaagag gaaatggcat ttatcccaat    2400
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gtgagggctt ctgacaatac ctttggtatc ggtgtacact ccaatgatca catgtactgg    4440
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tccgactcac gttataaaac ctatctgggt gaagtaaccc tgcaattgga tcagatcgca    4620
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cggttcctcc gggatcatct cctttcagac tataaatgga agtcagacac ggagttgaga    4860
atgtatgctt tggaaaagga aaatatcaaa ttgagaaaca gaattgaaca attagaaagg    4920
agggctgctt aa                                                        4932
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<210> 487
<211> 393
<212> DNA
<213> B.fragilis

<400> 487

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acagtaaaag ttatggcaga aaagacaaga tattcggatg cggaactgga agaattccgc    60
gccatcatta atgaaaaact ggaattagca caacgtgact atgaacagtt aaaactaagt    120
ctaatgggac tggacggaaa cgatacagat gacacgtctc ctacatataa ggttttggaa    180
gaaggagcga atacgttgtc aaaagaagaa accacacgtt tggcacaacg ccagttgaag    240
tttattcaag gcttgcaagc tgctttggta cgtatcgaga ataagacgta tggcatctgc    300
cgcgaaactg gaaagttaat tcctgcagag cgtctgcgtg ctgtgcctca tgctacactg    360
agcatcgaag caaagaacag tggaaagaaa taa                                 393
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<210> 488
<211> 762
<212> DNA
<213> B.fragilis

<400> 488
atgagcatat taagtaaaaa tagaataaaa tatattcgtt cgctggaatt aaagaaaatc   60
aggaaagagg aaaaagtttt tttagcagaa ggtccgaagc ttgttggtga tgtattagga   120
tatttccctt gtaaactatt gatagcaaca tctgattggc ttgaggaaca tcctgcagtt   180
caagcagcag aagtcattga agtaacttca gaggagcttt cccgtaccag tctgttgaag   240
acaccacaac aggtattagc attgtttgaa caacctgaat atgaaatcga tatggaagct   300
atccgcaatt ctttgtgttt ggctttggac aatatacaag atcctggaaa tcttggtacg   360
atcattcgtc ttgccgattg gttcggaatt gagcacattt tttgttcgcc caacacagtt   420
gatgtgttca atcccaagac aatacaagcc acaatgggag gaattgccag agtaaaagtg   480
tattatacag ctttaccgga cttgatgcat tcgttaggga atgtacctgt atatggtact   540
cttttagatg gggaaaatat gtatgaacaa cccttgtcga agaatggaat tataataatg   600
ggcaacgaag gaaatggtat cagccctgag atagagaagc tggtaaaccg taagttatat   660
atccctaact atcctgcaga acgagagact tcagaatcac taaatgttgc tattgctact   720
gcaattgtct gtgcagagtt tcggcgacag gctgcattgt aa   762

<210> 489
<211> 1032
<212> DNA
<213> B.fragilis

<400> 489
caatatgtat ttctaccctc ggtgaacgat agtaattgta gaaagtacag aaagccgggg   60
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gtattttata gggtatgtca ttttgtatct tctttgtttt tatcctatct ttgccaccaa   180
actattaaaa aaactaaaat gaaaacttat ccggtcgttc tttccattgc cggctccgac   240
tgttcgggcg gggcaggcat tcaggcagat ataaaaacga tttctgcttt gggagcatat   300
gcggcatcgg taattactgc tgttaccgtg cagaatacaa gaggagtaaa agctgtgcat   360
acagttcccg ctgagatagt gcagggacag attgaagcgg ttatggaaga tttgcgtccg   420
gatgccctga aaataggtat ggtgagtgaa ccggcgcttg tgaagattat tgccgggtgc   480
ctgctaaagt atcctcattg tccgatagtt tatgatcccg tcatggtttc aaccagtgga   540
cggaagttga tggcaaaaga tgcaatacag ttgatcaaag aagaactttt tccacttaca   600
agcctgatca ctcccaatct ggatgaaacg gaggtactga ccggaaagaa aatcacaaca   660
gcagaagaga tgaaagaagc tgcccggcaa cttttcagaag agtatcatac agcggtattg   720
gtgaaaggag gacatctgga gggaaacgaa atgcaggatg tgctgtttac cgatgggaac   780
gcctatatat ataaggagaa aaagatagag agccggaatt tgcatgggac gggatgcacc   840
ctttcttctt cgatcgccac ctatctggca ttaggacttc ctatggacca ggcagttggc   900
aaggcaaaga gttatgtaag caaagctatt gatgccggca aggaaataat tatcggacat   960
ggcaacggac cgttatgtca cttctggggc cctgagaaag cccggatatg ggacgataat   1020
aaggtagaat ag   1032

<210> 490
<211> 207
<212> DNA
<213> B.fragilis

<400> 490
aatatatctt ttaaccctag attagtgttg acggggggtca tgcaagtgag attcgttaag   60
aagctatttc cactcaagat attttttccgt ataatatcaa acgatctttt atattggctt   120
aaagaaatag gttggggctg ccatattatt gggtatctga aaggtgtaac aacagacgtg   180
cagtttgtaa aaccgttcag attgtag   207

<210> 491
<211> 201

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<212> DNA
<213> B.fragilis

<400> 491
atattgactt caaagaaaat gcattgcttc aaaaaggcaa tgcatttttt atcggtattg      60
caaaaaaaat ataatgtgag catcttttta atatctgatc tgttatatca acaatataaa     120
aaaagtaact atggactatc tattttttcta tctattcttt ttgttcatta tatggacatt     180
tatcgtaaaa agtatacatg a                                                201


<210> 492
<211> 1242
<212> DNA
<213> B.fragilis

<400> 492
atgaacaatt cccctcagcc tgctgccaaa gggttcacaa gagccttta tgtcagcaac       60
acagtcgaac tgtttgaacg catggcttac tatgctgtgt ttatcgttct cactatttac     120
ttatctacta tttttaggttt taatgatttc gaagcaagta tgatttccgg tctttttttcc    180
ggtggattat acttgcttcc tattttttacc ggagcatatg ccgataagat tggttttcgt     240
aaatcaatgc ttgttgcctt ttcgttatta actgccggat actttggttt aggagtattg      300
cctacattgc ttgaaagtac cgggttggtg agctatgggg caagtaccca ttttagtgga      360
ttgacagata gcgtttttccg ttggttgata gtgccggttt tatttataat catgataggc     420
ggctcattta ttaagtctgt tatttcggct tctgttgcca aggaaacaac cgaggctacc      480
cgtgcacgtg gatattctat tttctacatg atggttaaca tcggtgcttt taccggaaaa      540
acagttatcg atcctctccg aaatatgatt ggtgatcagg catatattta cataaactat      600
ttctccggat ttatgactct cattgctttg ttggctgttt tctttttgta taaatcaact     660
cacaccgtag gagaaggaaa aagtatgcgt gagatcggac aaggtttctt gcgtattgtc      720
accaattggc gtttattgat tctaatactt attatcacgg gattttggat ggtgcagcac     780
caactttatg ctacgatgcc aaagtatgta attcgtatgg caggtgaaac agccaaacct      840
ggctggattg ctaatgtaaa tccttttgtt gtagtatgtt gcgttagttt tgtaactcgt      900
tggatggcaa aacgaagtgc cattacctca atgaatattg gtatgtttct gattccggtc      960
tctgctctat tgatggcatg cggcaatctt ttggataatg aagttgtttc tggaatgagc     1020
aacattacat tgatgatgat tgtcggtatt gtagttcaag gtttggcaga atgttttata     1080
tctccccgtt atctggaata ttttttctctc caggctccca aaggtgagga aggtatgtat    1140
ttagggttta agtcatcttc attctttttt atcttccatt ttcggatttg gtcttgccgg     1200
cgttctgctg accaagtatt gtccggatcc aactttgttt ga                        1242


<210> 493
<211> 987
<212> DNA
<213> B.fragilis

<400> 493
aaaaaatact cttcaatgat tagtgataca accatacgaa aacttgttga ttatatctca      60
ctgaatgcct gctctgtcaa ctcttccggt ctttacaacg gaaaatcagg aatctctttta     120
gcgttatttg aaactgctaa atgtttgcaa gatactgaaa ttgaagataa agctttcagc     180
ctattccaag aatctttaat aagaaaaaca aatgattatg gctttgaaaa tggtatgtcc     240
ggaataggat atgtccttat ctatctaata acaaataaat taattgatgc cgattttgaa     300
gatttgtttg gagaccaacg cgaagcaata atcaaacatt ttgaaaacat tgacaagcag     360
ccggataagc tgttagtttc atataaaatt atttattttt tatttgtctt ggataaatta     420
caaaagcaag atgagagaat atattcaatt attgagaaaa tatttcaagg actggaactt     480
tatttatcac ttcagttttt cgattggaaa aatatttatt acataaatag taaagattat     540
gtattacaaa tgtatgaggc ttatttaaag ttggtcgatt tttgcaatta aaatatttt      600
tcaaaatcat tgatggatag ttacgttaca ttatatagtg agggaagaat tgcgagttca     660
cttgttaggg gatattactt aggtagtatc attactaaaa ataatatggt tggttttaat     720
gatgtaataa gagatcatat cagatatgga caaaagaata ttaatccggc tattctcttt     780
ttggaccaaa agataaattt aacgggaatc atagaaacg ctgatgaaaa tcgtgtaaaa     840
attcagcgta tagaaatgga tttgtttgaa gaaagtttag aaaggataaa aagaatggtt     900
cgtcccaatt gtatacatgt tggatatcaa tatggattgg cccgttatct tggctttttgc     960
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gcgaataaaa aatttccttt actttaa   987

<210> 494
<211> 312
<212> DNA
<213> B.fragilis

<400> 494
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ctggcacctt tcacaagtcc ggcgatatct acgatttcta ctgttgtggg gacgatgcgg   120
ttggggtgta ccagttcagc cagtttattt aaacgttcgt cgggcacggt aattacgcct   180
acgttcggtt cgattgtaca gaaagggaag tttgccgcct gtgctttcgc attggacaga   240
caattaaaaa gtgttgactt acctacattt ggaagtccga caataccaca ttgcaatgcc   300
ataatattat ag   312

<210> 495
<211> 615
<212> DNA
<213> B.fragilis

<400> 495
agagttggat cgtattgtgg ctcttctcac gaaagaagga ctttcggcaa ctgcttctta   60
ttgagaatta ttcttaaacg tatcatttat aaaaaagatt tggatatgat gaaaccaatt   120
gctgtcaacc aacttagtga taatttcttt gaaaccatca gtaaagaatg gatgttggta   180
actgccggta ataaagatgc ttttaatacc atgactgcca actggggtgg tatcggattt   240
ctgtggaata aaccggttgt ttatgttttc attcgtccgg aaagatatac gttcggcttt   300
atggagaaaa atgattattt cactctttct tttttagggg aggagaataa aagtattcat   360
aaaatatgtg gttctaagtc gggacgtgag gtggataaga tcaaggagac cggattgaaa   420
ccgatgatta ccgataaagg caacgttctg ttcgaacaag gaaggttgag tctggaatgc   480
cggaaattat atactgatgt gttgcggaaa gaaaactttc tggatccgtc tgtgtatgaa   540
caatggtata ctacacatgg aggtttgcat catgtgtatg tggcggagat tacgagtgca   600
tggataaaag attaa   615

<210> 496
<211> 195
<212> DNA
<213> B.fragilis

<400> 496
aatataaata caaagaaaaa caatacatgg agttttgtta ttgaattcat atttaatatt   60
atttataaag attatcaata cttagtttcc tctggctcct cgtcctttcg tcaaaccatc   120
tctcagccct ttagaatacc atatcatatc actattgaca cccccgattt cactaccggc   180
agaaatgaca gctaa   195

<210> 497
<211> 951
<212> DNA
<213> B.fragilis

<400> 497
aaagaatggt tcgtcccaat tgtatacatg ttggatatca atatggattg gcccgttatc   60
ttggcttttg cgcgaataaa aaatttcctt tactttaata acttgataac aatgtgtgag   120
atatctgttg taatgcctgt ctataatgcc gaaatgcata taaagatgc gatagaaagc   180
gtcttagagc aatctttttgt ggattttgag tttatcctca tagacgatgg ttctactgac   240
cgcacgtctt ctattattca gtcatataat gataaaagag tacgtcttat tcagaacagt   300
cataatttta tagagtcatt gaaccttgga atagagaatt ctttaggaaa gtatatggct   360
cgtatggatg gagatgatat aatgcatatc gatagactaa aaattcaata tgcgattatg   420
caagaatatc cggatgtaac tgtttgtgga acttggatga acagtattgg aacatattca   480
caaacgaatg gtttattgag taccttgagt gggttggttg aacaaccact gttaaaattt   540

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acaaagggaa atttcttatt tcatcccact actatgataa ggatggattt tttgaaaaag    600
aatgcattaa aatatgagaa ctgcccttat gccgaagatt ttaaattttg ggtggagata    660
gcaaagtcag gagggagatt ttatattgac agtcaaccat tactctatta ccggatatca    720
gacagtcagg tcagtagcca aaaaagtagt gagcaaagag caacaacaga gtctataatt    780
aatgaggttt tggaatatct gatggaactc aataaaaatg aatatccgga attggcagca    840
gcttatggtg atttatgtaa gttgtacgaa aaacaattac ttactaaatg tgaagtatta    900
actttatttc aaactttatt ttcaaagaat gaaaagaagt tgaacctata a             951
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<210>  498
<211>  627
<212>  DNA
<213>  B.fragilis


<400>  498
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agaatgcgtt acacttattt tgcaagtgta gctaaaaaag aaggttacga acagattgca    180
gctatcttta cagagactgc cgatcaggaa aaagagcatg caaaacgtat gtttaagttc    240
cttgaaggag gtatggttga aatcactgca agctatcctg ccggtgttat cggtaatact    300
cttcagaatt tgcaggctgc agcggcaggc gaacatgaag aatggtcttt ggattatccg    360
cattttgcag atgttgcaga acaggaaggt ttcccaatga tcgctgctat gtatcgcaat    420
atctctattg cagaaaaagg gcatgaagaa agataccttg ctttcgtaaa aaatatagaa    480
gttgcatctg tattcgctaa agaaggcgaa gttgtatggc agtgccgtaa ctgtggttat    540
atcgaagtgg gtaaagaagc tcctgaggta tgtccggcat gtctgcatcc acaagcatac    600
ttcgaaatca agaaagaaaa ttattaa                                        627
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<210>  499
<211>  2049
<212>  DNA
<213>  B.fragilis


<400>  499
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gttaatatga cgttgataac ttctacttgc catgctcaga atcgttcgga ttatccttgg    120
gaagaggtga tggaaaactt gtctatatcc gatgaagaag gagatatacg taattgggag    180
aatgaattgg aggaattaac cgatcttgtt aacaaccctg ttaatataaa ctctgccacc    240
aaagagcagt tacagcggtt tccttttctt aatgatgttc agattgagaa tttacttgcg    300
tacatttata ttcacggatc gatgcagact gtctatgaac ttcagttagt ggaggagttg    360
gatcggcaga ctattcaata tctgcttcct tttgtctgtg tagagcctgt tgataagaaa    420
gagtctgtta cgttaaagca gatttttaaaa tatggaaaac atgaagcggt gactcgtatg    480
gatgtgcctt tgtataagcg taagggatac gagaaaaatt acttgggtcc tgctgtttat    540
aactcggtga aatatggatt tcactatcgg gaaaaggttt atgcaggtat agttgccgag    600
aaagatagtg gcgaaccttt cggagcttta cataataagc agggatacga ttactactct    660
ttctatctac ttcttcatga tataggaata ctgaaaactg gaattgtagg aaactatcgg    720
ttgaatttcg gtcagggact ggtactcgga caaggttcta tgtttggaaa aacagcttat    780
tcttcgtctt tcactttcag gagtacaggt atacgcagac atacttctac cgacgaatat    840
aattatttcc gtgggagtgg catagctcta aaatggaaac aatggacact ttccgtattt    900
tattcacatc gttcgttgga tggagtgata aaaggcggtg aaattacctc gatttataaa    960
acaggtttac accgaagcga aaaggaagct gataaaatga atcaattgac tatgcagatg   1020
agcggaggaa atatcagtta taccggaaat agttatcaac tgggtataac cggtgtttac   1080
tactgtttta acaggtctta tgaaccggaa cttaaagact attcaaaata caacctacat   1140
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caaggagaag cagctttggg gatcagtggt atggctttta tgaatcaggt gctttattct   1260
cctttacaag atatccggtt gatgttggtt caccgttatt attcccatga ttattgggct   1320
atgtttgctc attcatttag tgaaggaagt agtgttcaga atgaaaacgg atggtatctg   1380
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gcaaattacg ttccgtcgaa aacggttgat atgtatgtga attaccgtta taaacaaaaa   1560
gaacgtgatg tgaccggtac gcagggaaaa gtgattctgc ccacctatca tcaccggctg   1620
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cgttatcgat tgaactattt acgatgctct tcgttatttc tccggacaac agtcgattat    1680
aatcattttc attcatccgg aaaaacggct ggacaaggtt atcaactgac gcagacggct    1740
ggatggaaac ttccctggtt gcctctgaca gcagaattgc aaggtagcta ttttcataca    1800
gacgattatg attcacgcat ttatatctac gagaaagggt tgctgtattc tttttatact    1860
ccatcttttc agggagaagg tattcgcttg gctatttatt ttcgctatga tatgaacaag    1920
cattggacag caattgccaa gctcggacaa accacatatt ttgatcgtga tgaaataggt    1980
tccggcaacg acctgatcag gggaaataaa aaaacggatg tacaaatgca gctgcgtcta    2040
aagttttag                                                            2049
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<210> 500
<211> 477
<212> DNA
<213> B.fragilis

<400> 500
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ccgataattg aagagtcatt gcaaatgagc tatgtggggg gaggaaatgg aacatcagcc    120
aatccttata cccaagagga atatgaaagc atggttagta gtggcatatg gaatggagga    180
tatgtagaaa attggggata tacttttcct gagatggcag tttcgagtta tgatcccaat    240
aacttgccta aaacgggggt ggatagctat gatctaatgt atcaaggcgg gtttgctata    300
gggtataagg ccgggttatc gggatctaca ttggatgaca tagggattgg tgcatggagt    360
gctttagctg tcatttctgc cggtagtgaa atcggggggtg tcaatagtga tatgatatgg    420
tattctaaag ggctgagaga tggtttgacg aaaggacgag gagccagagg aaactaa       477
```

<210> 501
<211> 360
<212> DNA
<213> B.fragilis

<400> 501
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ctttggcgga ctgtagaaaa taaaagtact atggatgata ttgtaaaagt cctcgtcatt     60
atggctgctt tcgcattacc tcttatcaga cagatcaaaa agagcaaaac agaaagatct    120
gcccaaaaac ctttcgtacc cattccggat actgaagaac cggaagtcct gaaagtcacg    180
cgaaaatacc aaccgttaca ctcccaatcc acttctcaga aagtggaagt aaaaaagaac    240
aaaacagttt ctcagaaaat agaaacgact ccggccaacg acccggaatt taccattcat    300
tcggctgaag aagcccgaaa agccattatc tggtccgaaa ttctaaatag aaaatattga    360
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<210> 502
<211> 660
<212> DNA
<213> B.fragilis

<400> 502
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atgaggctta ccataggact tttgatgtta tctatcgcct tattgttttc ttccgaatca    120
ctggcacagg aaaaaacaaa tctcggtgga tacctggtac ctatgtgtgt gtataatggt    180
gatacaatcc cggctttcca gattccgacc attcatatat tcaagccttt aaaattcaga    240
aacagaaaag agcagatgga atattataaa ttggtgagaa atgtgaagaa agtgtatcct    300
attgccagag aaattaaccg caccatcatt gaaacttacg aatacttaca gaccctgccc    360
aacgaaaaag cccgccaacg tcatatcaaa cgggtggaaa aaggattgaa ggagcaatat    420
actccacgaa tgaaaaagct ctcttttgca caaggcaaac tgttgataaa gctgatagac    480
cggcaaagcc atcaaagttc ttatgaactg gtaaaagcat ttatgggacc tttttaaagca    540
ggattctatc aaacatttgc cgctcttttc ggagccagtt taaaaaaaca atatgacccc    600
gaaggagaag ataagttaac cgaacgagtg atactgttgg tagaaagcgg acaattgtaa    660
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<210> 503
<211> 927
<212> DNA
<213> B.fragilis

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<400> 503
cattgttatt taatacctac acacaaaatg attagtaaac ccacaaaatc cgatgtaatg    60
cgagagttga gagattatat tttcatcact ctcggactga taagttatgc attaggctgg   120
acagcttttc tgattcctta tcagatcact acaggtggaa caaccggtat cggtgccatc   180
atctattatg caacaggttt ccccattcaa tggtcctact tcatcatcaa cgctgtcctg   240
atgacatttg ctattaagat actcggtccg aaattcagta taaagacgac atacgccatc   300
tttatgctca ctttcttctt atggttcttc caactgatca ttgtggacga taaaggagct   360
ccgcttcagt tggtaggaga agggcaggac tttatggctt gcatcatcgg agccatcatg   420
tgtggtctcg gattaggggt ggtatttaat aataacggca gcacaggtgg taccgatatc   480
attgcagcca ttgttaataa atataaggac gttactctcg gacgaatgat catgttctgt   540
gatatcatta tcatcagttc atgctatttc atctttaacg actggcgcag agtgatattc   600
ggtttcgtta ccttgtttat catcggtttc gttctggact atgtagtcaa cagcgcccgt   660
caatcggtac agttctttat cttttcgaaa gattatgcaa agattgccga ccgcattacg   720
aaagaaaccc atcggggagt gaccgtactt gacggattgg gctggtacag ccagaataat   780
gtaaaagtat tagttgtact tgcctacaaa cgtcagtcac tcgatatttt ccgtttagtg   840
aaagatatcg atccgaatgc ttttatctcg cagagttcgg taatcggtgt atatggtgaa   900
ggattcgacc gcctgaaaat aaaataa                                        927


<210> 504
<211> 228
<212> DNA
<213> B.fragilis


<400> 504
gagctgatcg cgctgtctat ttttgattgc caggaaaaat tagtgtttgc aacccagtcg    60
tacgatcggg cggattcacg catggagggc gcaaccgaac aagattgcgc taaaaaaaga   120
accgatgcca ataatataaa gtatttcata accggtgttt ttataaattt tctatccgct   180
tctgtatctc ctttattttt tcctgtcttt gttttatttt cattataa                228


<210> 505
<211> 438
<212> DNA
<213> B.fragilis


<400> 505
ttcataaatt tactaacttt ccgccaaaaa tctgacaaaa tgaaccgtat ctttcatgct    60
cgcattgtct ggtaccaata tttcctgctg gttgtattgg gtgttaatgc ttttggtttc   120
ttatggtgta agaatattat attagctact ctgatgatgt tgtttctgat tgttgttatc   180
gaacagatca tacatactgt ttataccgtt acggcagacg gtctgctgtt acttaatcat   240
ggccgtttta tccgtaagaa aaccattcct attgcagaaa ttacttctat ccggaaagtc   300
cattctatga aattcggaag tttctctgta accaactatc tattgataga atatggaaaa   360
gggaaatatg cttctgtact tccggtgaaa gaaaaggaat ttatggaact gattgaaaaa   420
acaagaaact taatttag                                                 438


<210> 506
<211> 636
<212> DNA
<213> B.fragilis


<400> 506
ttttcaaaat atatgctgat tcttttgaca ggttttaaac cgttatcaac acctatgtta    60
acaagaaaag aattactttt gcaacatact aacagaaacg acatcatcat gcgaaaattg   120
aaaataaccg agctgaaccg dataagtata gaagagttta agaagctga taaattgcct   180
ttagttgtag tgttggacga tatacggagt ttgcataata tcggttctgt gtttcgtacg   240
gcagatgctt ccggattga atgtatttat ctgtgtggaa ttacggctac tcctccccat   300
cccgagatgc ataagacagc tttgggagcc gagtttacag tggattggaa gtatgttaat   360
aacgcagttg aaacggttga taacctccgg agtgaaggat atgtggtata ctctgtcgaa   420
caggcggaag ggagtatcat gttggatgag ttaacactgg accgttcgaa gaaatatgct   480
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```
gtagttatgg gaaatgaagt aaaaggagtg cagcaggagg ttattgacca ttcggatggt    540
tgtattgaga ttccccaata tggcacaaaa cattcattga atgtatcggt aacagcagga    600
attgtgatct gggatttatt taaaaagttg aaatag                              636
```

<210> 507
<211> 1347
<212> DNA
<213> B.fragilis

<400> 507
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actatgaaat accaggttat tattatcggt ggagggcctg ccggctatac ggctgctgag     60
gctgccggga aagcaggact gagtgtgttg cttttttgaga aacaaaattt aggaggtgtt    120
tgtctgaacg aagggtgtat cccgacaaaa acgttactct attcggctaa aacctatgat    180
ggtgctaaac atgcgtcaaa atatgctgta acggttccag aggtcttttt tgatcttcct    240
aagatcattg ctcgtaaatc gaaggtggta cgtaaactgg ttttagggt aaaatcgaag     300
ttaacgtcca ataatgttac tattataagt ggagaggcaa ccattttgga caagaatacg    360
gttcgttgcg gtgaagaaac ttatgaatgt gataacttaa ttctttgtac aggttccgaa    420
acttttattc ctcctatttc cgggatcgat agtgtaaact attggacaca tcgtgaagca    480
ttagacaata aggagttgcc ggcttcactt gccattgtgg gcggtggagt gatcggtatg    540
gagtttgcgt cctttttcaa tagtctgggt gtgaaggtga ccgttattga gatgatggat    600
gaaattctgg gaggcatgga taaagagctt tccgccctgt tgcgtgccga ctatgcaaag    660
cggggcattc agttcctgtt aagtaccaaa gtcgtttcat tggcacagac ggaagaaggt    720
gctgtggttt cttatgaaaa cgccgaaggg gcaggaagcg tgattgccga aaagttatta    780
atgagtgtgg gacgtcgtcc ggtgacaaaa ggctttgggc ttgagaacct taacctgcaa    840
cggacagaac gtggaagtat tgtagtgaac gggcaaatgg aaagctcgtt acccggagtc    900
tatgtttgcg gtgatttaac cggattctcc ttattggcac atactgctgt ccgtgaagca    960
gaagtagccg tacatgcaat tcttggaaaa gaagatagga tgagttatgc cgctatcccc    1020
ggggtagttt atactaatcc tgaaatagcc ggtgtcgggc agacagaaga atctctgact   1080
gcaaaaggca ttgcttaccg tgccgtaaaa cttcccatgg catattccgg acgttttgtt    1140
gctgagaatg aaggagtgaa tggagtatgt aaggtgctgc ttggcgagga tgatactatt    1200
ttgggagcac atgtttttggg taatcctgct tctgagatta tcacgttggc agggatggct    1260
gtagaaatga aactgaaggc agccgagtgg aagaagattg ttttcccaca tcctacggtt    1320
gccgagattt tccgtgaagc attataa                                        1347
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<210> 508
<211> 252
<212> DNA
<213> B.fragilis

<400> 508
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ggtcaggggt atttccaaca agacgagcct gcatttttccg tgttcgatcc tgttcttgat    60
tatttcaaca cccatgtcat tcatcgttcc ggtgccatgc acgctctccc cgatggcgag    120
tatcctttta ccggaaaagg gcagggactt aagatcgccg ccgttagcgg gcatcacatc    180
cgattcccgg acggaagccg ccgtgccgtt attcaaggat gggagttcaa ccgcatattt    240
tccatcaatt aa                                                        252
```

<210> 509
<211> 249
<212> DNA
<213> B.fragilis

<400> 509
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tattatagtc ttttttatat tatcaatcag ttgtgtattt ctatcaaatg gaagagtaat     60
cctgtaaagt tgaaaaagag caattactct gataatattc cgttttgggg tgcaaagata    120
atcaatttta ggctaatgca gtcatctgct ttctcttttt gtccaaaacg gggttgcctt    180
ttattacctg gatcacagac aatgagagag aatttgtgtc actctgccgt cttgaaagaa    240
atttcgtag                                                            249
```

<210> 510

<211> 957
<212> DNA
<213> B.fragilis

<400> 510
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caagcaacac ataaaatatc aataaatatg gaaagtacca acagacttcg ttatcttatc    60
gcaggaaccg gaggcgtagg cggaagtata gccggctttc tgtcacttgc cggaaaagac   120
atcacttgca ttgcccgtgg agcacatctg caagcaatac aacaagacgg gctcaaattg   180
aaatcagatt tgaaaggtga acatgctcta cggataaatg cctgcacggc agaagaatat   240
aacggaaaag ctgatgtgat atttgtatgt gtcaaagggt attccgtaga ctctatcaca   300
gagcttatca agcgggcagc ccacgaccga acgattgtaa ttcccatatt gaatgtatac   360
ggcacaggac cgcgcatcca acgtctcgta ccgggagtca ccgtactgga cggatgtatc   420
tacattgtag gctttgtttc cggaccgggc gaaatcactc agatgggaac catctttcgt   480
ctggtatatg gtgcacaccg gggaatcctt gttccggcag ggctgatgga ggccgtacag   540
agggacttgc aggaaagcgg catcaaagta gaaatctctc ccgacatcaa tcgggatacc   600
ttcattaaat ggtcgtttat ttcagccatg gcagtcaccg gagcttattt cgatgtcccg   660
atgggagaag ttcagaaacc cggcaaagtg cgcgatactt ttatcggact ctctaccgag   720
agcgctgctc tgggaaagaa actcggaatt gaatttaaag aagacatagt cacatacaat   780
ctgaaagtaa ttgataaact ggctcccgaa agcacagcat ccatgcaaaa agatatagca   840
cgcggacacg aatcagaggt acaaggtctg ctctttgaca tgataacagc agccgaagag   900
caaggtatcg atgtgcctac ttatcgggaa gttgctaaaa aattcatcaa acaataa      957
```

<210> 511
<211> 600
<212> DNA
<213> B.fragilis

<400> 511
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aataaactgc atacaatgaa acgtaaactt gttttcgcaa ccaataatgc acataagctg    60
gaagaagtat ctgctatctt aggggataaa gtcgagctac tcagcctgaa tgacatcaat   120
tgtcatacag atattccgga gacagcagag actcttgaag gcaatgcata cctcaaatca   180
tcttttattt accggaacta cggattaaac tgctttgccg atgacacggg actggaagtt   240
gaatcactgg gaggtgctcc gggtatctat tcggcccgtt atgccggtgg agaaggacac   300
aatgcggaag ccaacatgtt gaaactcctc cacgaactgg aaggaaaaga caaccgtaga   360
gcacagttcc gtacagctat ttcgctcatt ctggatgaaa aggagtatct cttcgaagga   420
atcataaaag gcgaaataat caaagaaaaa agaggtgatt ccggattcgg atacgatccg   480
gtattcgttc ctgaaggata cgaccggacc tttgccgaat taggtaatga aattaaaaat   540
caaatcagtc atcgtgcttt ggctgtgaac aaactatgtg aatttcttcg ttcgatctga   600
```

<210> 512
<211> 1482
<212> DNA
<213> B.fragilis

<400> 512
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agatattcta aaacattgaa aacattatta tatatattgg tattttcttt gtgctatacg    60
aatgcatatt gtcaaagtat accaagggaa gtgacattag atgaagtgat aaacagacta   120
tctctggaat catcatcggc taaaatagaa ttacttaact tccaaaatga cttattgcga   180
tacgagaatt ataagaaaag ctttctccct gcatttgtgc tgaattttaa tcctatcaat   240
tttaacaggt cactgcgatt attgcaacaa ccgatcgatg gaagttattc ttatgtagag   300
gacaattcaa ataatactaa ttttggtact actgtacgac agaaaataag cataacagga   360
ggggaactga gtattggaag taatataaat tatttgaatg agttttcacg taaacaaaac   420
agttttagta caaatccgtt ttttataagc tattcgcagc agttgtgggg aggaggaaaa   480
ttacaaaggt tggaaaacaa aattgaacgt gccaaaaacg aagtggccgt gaaacaatat   540
tgttcaaaca ttgcccagat ccagcaacaa gcattgacgc tttatttatc cgccatactg   600
agtaagatgg atagtgaact tgctatagat atcaaacaga gcaacgacac tctgttacat   660
attgcagaga taaaattgag gaatggaagt atcactgaat atgattacaa gcagatggaa   720
ttgcagtcct taaacttgca atacatgtat gaaaatgcgg tcaaacacta tgcggaatca   780
atacaaaaac tttttacttt tttaggaata gaaaataatg ccgaaattac aataccggat   840
```

```
tttgacttac ccttaactat cgatgctcgg cttgtaatct actatgtgaa aaaaaataat    900
ccaatttcaa atcagcaaga gattcaacag ttggaagagg agaaaaacct gttctctatc    960
aaattgaaga ataggttcaa tggaaatata agtttaaact atggaataaa tcagtatgct   1020
gaaacattgg ccgatgctta ccggcatgga aatacaagac agtccgtgat cattgaattt   1080
caaataccta tttttcagtg gggcatcaac aaaaataata tccggatcgc aaagaataat   1140
tatgatgcaa gtcggttgcg aatagaaaaa aaaatgtttg aatttgagaa cgaagtaaaa   1200
gaaaagataa atgcttatga tcatagtgta aagctttggc tgacagcatc aagagcctat   1260
gcgttatcga aagaacagta taagatgttg acgaaaaagt tttcattggg aaaagtgtcg   1320
gtatatgaac ttgccaccgc acaaaaagag cggaatgatg ctatgcagcg ttactactct   1380
gccatcaaag attcttacga aagcttcttt acattacgta atttggcttt atatgatttt   1440
aaaaaaaatg tcgaattaga aaaaatactc ttcaatgatt ag                      1482
```

```
<210> 513
<211> 579
<212> DNA
<213> B.fragilis
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<400> 513
tttatttata aaccattaat aataactgca atgaaaaaat taacaaagaa aaatttaagc     60
gaactggcga aaacaatgcc ggtaattgaa gagtccttgc aaatgagcta tgttggggga    120
ggaaatggaa catcagccaa cccttatacc aaagtggaat tcgatagtat gcttagtaat    180
gacaactgga acggtggtta tgtagaggga atgggatatg tggctcccaa tacgtatatt    240
tatgggaatt cagtatactg gggatcggta tcacaagatt attatacatt ccagattat     300
gtcacttctc tttcttcgga tggactaaat caaatggcgg aatcattggc aggtgcaata    360
ccaggagtgg gttcttatac cgcttattta tctcaagagt taggtgatat gagtagagag    420
attcaatctg aactgttaaa aaaaggatat aatggttctt cttcattcac aattgttcgt    480
acgtatatgg gaagttctgt taaattttct gtatataacg cgaataatgg agaacttata    540
acttccaaaa cgattaatat gttcggattt tggcagtaa                          579
```

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<210> 514
<211> 1521
<212> DNA
<213> B.fragilis
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```
<400> 514
cacgaaaata atactataat tatggcattc aaatccattt ctgcagcaga agctgccagc     60
cttgtcaaac atggctacaa catcggcctc agcggtttca cacccgcagg aacggccaaa    120
gcggtcactt ccgaaatagc aaaaatagcg gaagcggaac acgcaaaagg aaatcctttc    180
caaatcggca tctttaccgg agcctctacc ggagattcat gtgacggtat attatcacgt    240
gtaaaagcca tccgctatcg tgccccttac actaccaacc ccgatttccg taaagctgtg    300
aacaacggtg agattgccta taatgacatt cacctttcac aaatggcaca agaggtacgc    360
tacggattca tgggaaaagt gaatgtagcc attatcgaag cctgcgaagt aactccggac    420
ggaaaaattt atctgacggc tgccggcgga attgctccga ccgtctgccg cctggccgac    480
cagatcattg tcgaactgaa cagtgcacac agcaaaaaca tgatgggaat gcatgacgta    540
tacgaaccac tcgatccgcc ttatcgccgt gaaattccga tctataaacc aagtgaccgc    600
atcggactac cttacataca ggtcgatccg aaaaaaattg taggtatagt agagacaaac    660
tggcccgacg aagcccgctc atttgcagca gccgatccta tcaccgataa aatcggtcag    720
aacgtagccg acttcctggc tgccgatatg aaacgcggta tcattccttc tacattcctt    780
ccgttacaat cgggagtagg caacatcgcc aatgcagttt ggggtgcatt gggacgtgac    840
caaacaattc ctgccttcga aatgtatact gaggttatcc agaactctgt gatcggtttg    900
attcgcgaag gacgtgtaaa attcggcagt gcctgttcgc tgaccgtaac caacgattgt    960
ctgcagggta tatatgacga tatggacttt ttccgtgata aactgatcct ccgtccgtca   1020
gaaatctcta acagccccga gtagttcgc cgtttaggca tcatctctat caatacagcc    1080
attgaagcgg atatctatgg taatgtaaac tctacccaca ttggcggaac caaaatgatg   1140
aacggtatcg gcggttcggg cgactttaca cgtaatgcgt acatctctat cttcacttgt   1200
ccgtcagtgg ctaaggaagg taagatcagt tctatcgttc cgatggtttc tcacctggat   1260
catagcgaac actctgtcaa catcgttatt accgaacagg gagtagccga tctgcgcggt   1320
aagagtccga aagagagagc acaagcaatc atcgagaatt gtgcacaccc ggattacaaa   1380
cagattttat gggattacct gaaactggca ggtaataagt cacagactcc tcatgccatt   1440
```

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caagccgctt taggaatgca cgccgaactg gctaaaagcg gagacatgaa aaacgtgaac    1500
tgggcagaat atgaacgatg a                                              1521


<210> 515
<211> 447
<212> DNA
<213> B.fragilis

<400> 515
agttgttaca atgaggtttt atataaaagc attagaaaaa ctaactcaaa aaaaaataga    60
tctcaatata tgaatattgc attttttaaca acattaaatc cggctgatat aaataattgg    120
tcgggaacga catttcattt gtttcacgct ctaagcagaa agcatcatgt aaaagtgatt    180
ggacagaata cccttcctca ggcagcgtat tttaccaaag ataattgtat taaaaaaaat    240
ccattagaga actatgtttc tgttttcggg aaattatgta ccgaacaatt gacgaattat    300
gatcttgtgt ttttttggaga tttatatttta gctcctttttt tggatgtaaa tgttccggtc    360
gtgcatctta gtgatgtgac ataccactca ttccaaagct acttaaaccc cctaaagaat    420
gaagaacggt ataggaaatt ggaatga                                        447


<210> 516
<211> 1374
<212> DNA
<213> B.fragilis

<400> 516
agaacaggca aaaagatgaa ttcaagaata caaaagcagg aacaacctat atgttcacca    60
aaaattattt tgcctaatcc taacaaaaaa tctgatgtga ttgccagatc tgaggaagta    120
caagccatta ttgaccgtat gcccacctac tggacaaaat gggtgatact atgtgtaggg    180
gtactgatgg gaatgatcat attacttggt tttttgatac agtatcccga tacggtagac    240
ggacaaatat cagtaaccgc aaatgcagca ccggtacgtt tggttgctaa cagtaacgga    300
cggattacgt tgtttcaacc caataaagca ttactgcata aaaatgatgt gattagttgt    360
atcgaaagtg gtgcggatta caaacatatt ttatggattg attctttttt gaagacactt    420
aatgacaaaa gcacaattcg tgttgcattg cccgatacgc tgttgcttgg ggaagtcagt    480
tccgcataca attcctttttt actttccttt ttacaatatg agcggttact tacttctgac    540
atttattcaa ccatgcgaca aaaattgcaa caacaaatta tttctgacga agcagtcatt    600
gccaatttta ataatgagct gcgattaaaa aaacaaatat tggataactc ccaaaaccaa    660
ttgagtaagg acagtatatt gctgtcgatg aaaggaataa gcgaacaaga ataccagcaa    720
aagttctcga cacatctttc tttaaaagaa tcacaattaa atttgcaaag taaccgacag    780
atgaaacaat cggaaataag tcgtaatcaa ttggaaatac agcgtatctg tttggaagaa    840
actgaggcta aagagaaagc ctattccgat tatatcactc ggaagaatga actttcaaat    900
gccattaaac tctggaaaga gcattatttg caatatgcgc ctgtagaagg ggagttagaa    960
tatcttggtt ctggcggaa caatcgtttt gtacagtccg ggcaggagct attctccatc    1020
attcccgata aaactaacat cttgggtgaa gtagtgatac cttctttcgg tgcaggaaaa    1080
gtagaagttg ggcaaacagt aaacgtaaaa atggacaact atccatatga tgaatatgga    1140
ttactgaagg gagtggtgaa atctgtttca cgcattacca acaagataaa aactcaaaat    1200
ggagacatgg atacttatct ggtaatcata tcttttcccg atggtacatt aactaacttt    1260
gggaaaatat taccccctcga ttttgaaaca aaaggtacag ttgagattat caccaaacga    1320
aaacgtttga ttgaaagact atttgataat ttaaaatcaa aaggagaaaa ataa          1374


<210> 517
<211> 1824
<212> DNA
<213> B.fragilis

<400> 517
ataatattaa atatgaattc aataacaaaa ctccatgtat tgttttttctt tgtatttata    60
ttctataccg tatcatgtac cgctaaatta gagaaacaga catatacgaa tgtatatgat    120
ttacattttg ctatgcggtc tgattctgcg gtggtttatc cgtggcgtga aaatggagca    180
tatagcaatt atactatccc tgcttatata caagattcaa atcgaaattt gttcgctaaa    240
aaatatttta aaggatttcc tttttctaag cggttaagat cagagtacga acagagaatt    300
```

```
ttgcttccca ataataacat aaaagaagct gtaatcggat ttgaaggtaa aggtgataat      360
ataaaacttg tctctatcat cttggatgcg ataggtaaac aggaaaacat tcttttttct      420
gacaccttaa gattcaggcc tgacagtata ttaagcttgg ttacccaaaa cattaatttg      480
actaatgcgg agatgttaaa cgtacggatt aatgtggaag gagaaattga taagaatgct      540
tatattgctt tctctcgatt ggacatactg attgacggta aacctatcga cgaatttcct      600
gttcgaaccc tttccccgtt gatagtagat aaaaaaatta actatacggg tataaatgtt      660
gatagaaaaa taggattgga gcaaatcaat gaaatcaatg ataaaaagat tatcggctta      720
ggggagtcag tccacgggaa tgacggtata aaaaatttag cgtatcaatt gattatccag      780
gcagtggaaa ggttaaattg caaattagta ctgcaggaaa tgcccctcga caatcattt      840
gcctacaata ggtttataca agatgacaat tatgaacttg attcttcctt ggttatcaac      900
catgctacaa ttaattttt aaaaagattg cggagcttta attctggtaa aacgaaagat      960
tctaaagtta aattatatgg catggattac aattcaatcc tttcttccac tcaaagttcc     1020
gctatggata tttttgattt tattaccggg cttaacaaaa aatcgcagat tccggaagtt     1080
gatcaattat ccctgctgtt aatgaaaaaa gatcgtaact gtgcgataaa ctttcttgat     1140
attcatcgag ataagataaa aaaacttctt actgctgaag aaatagaatg tatcttgcat     1200
attctgaggg tttcaaagca agccggagat ggcggaatag aaagattcat acggcgggat     1260
tccattatgt tcgtaaatgc aagattctta attgacaagt tcgccaaaga cgaaaacgta     1320
aaaacggtaa tctacgggca tgcgggacat attaatccta tttcgagtta tcctgccgta     1380
ccttgtattc ctttcgggag gtatatgcgc aaagcgtatg gtgaaagtta ctctcctttg     1440
ctatttctga taggaagtgg agaagccatg gcatatgatg agcattataa caggaaagat     1500
aattggttga gtagtcctcc tgaaaacagt atggaatatt ttttaagtct tattgatgac     1560
aatgtttttt cacccccctt aactgtcgat tttaatgaat taacactgtc tcgacttcag     1620
gggagtcacc atatcccaca agaattttat ccatttaact tatatcaaag atttaaaggt     1680
gtgtttttca taaaaagtac ggattgtacc cataaggatg aaaaagaaat ctcttttgag     1740
aaagcttctg ataggcttat aatgaaaata aaacaaagac aggaaaaaat aaaggagata     1800
cagaagcgga tagaaaattt ataa                                          1824


<210> 518
<211> 255
<212> DNA
<213> B.fragilis


<400> 518
atgaagataa aaaatattg ccgttacatt cacttatggc tttcactacc ggcagggatc      60
ctgatcagca tcatttgttt tacaggcgcc atccttgtat tcaaagaaga gcttctgaca     120
ataatgggat atgattccat ccgggaaagt cctttgatga tcgtgatgaa gctccaccgg     180
tgggttaagg atgataaccg tccgccaggt aaaatgattg taagtatttt tacctttttt     240
tcatctttat cctga                                                     255


<210> 519
<211> 315
<212> DNA
<213> B.fragilis


<400> 519
aacatcaaaa aaggcagaag aaggttaatg ttcgattacc actctgtact gggattatat      60
gcagcactta tcttattagt atgtgcactc accggattga tgtggtcatt tcaatggtac     120
agagacatcg taagttttat ctttgatgcg gaagtaaaac gcggagcacc tatctggaaa     180
atagtacgtg ctttacattt tggcacctat gcgggaatgt tttcaaagat cgtcactttt     240
atcgctgccc tgataggaac ttcattacct gtcacaggat attggatgta tctgaaaaga     300
aaaaaattac tatag                                                     315


<210> 520
<211> 1617
<212> DNA
<213> B.fragilis


<400> 520
tttatgaaaa acaattgtct gatatgttcc ttattgtttg cttcgggaat tcagaatgct      60
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tggggaactc aaataacaga ccgtaaagcg aatcctgatc aagcgaaacc caatataatt    120
ctgattatgt gtgatgatat ggggttttct gatttatcgt gttatggcgg agaagtacac    180
acaccacata ttgattttct ggcggaaaac gggatacgtt tcagtcaatt taaaaatacg    240
ggacgcagtt gccccagccg ggcggctttg ctgacaggta gatatcaaca cgaagtaggt    300
atgggctgga tgactgctgt ggatgaacat cgtccgggat acagaggaca gatatcggac    360
cggtatccta caatcgcaga ggtatttcgt gaaaatgggt accacactta tatgagcggt    420
aaatggcatg ttaccgttga aggagcattt acccaaccta atggaagcta tccggttgaa    480
cggggatttg agaaatatta cggttgcctt tcgggagggg gcaactatta tactcccaaa    540
ccggtatttt cgggtttgca gcgcattacg gagtttccga aagactatta ttataccaca    600
gccataaccg attctgccgt tagtttttatc cgtcaacatc cggttgatga acctatgttt    660
atgtatttgg ctcactatgc tcctcatctg cccccttcagg ctccaaaaga gagagtagag    720
gcttgtcggg aaaagtataa agcgggatat gacgtattgc gtaaacaacg cttcgaacgc    780
atccgtcgca atggcttaat cgacattgaa agagaacttc cggtatttga aaaagagttt    840
ggaggaaaac gtcccgcatg gaatagtctt actccgcagc agcaggaacg atggattacg    900
gaaatggcta cttatgctgc catgattgaa attatggacg atggtatcgg agaagtaata    960
aaagccacta aggaaaaagg tatatttgat aataccatat ttttattctt aagtgataac   1020
ggtgctacca atgaaggcga tatgatcacg caattgcgtg cagatttgag taatactcca   1080
tttcgcagtt ataagcaatg gtgttttcag ggaggtacga gtgctcctct gattatcatg   1140
tacggaggcg gacaacctga tggaaaaaag gaagcggttc gtcacgaatt tacacatatt   1200
atcgatcttt ttcccacttg cctggatatg gcttctattg aatatccccg ggaatttcga   1260
aatcatgcca ttgatgctcc tggaggcaga acgattcttc cggcgttgaa aggaaagaaa   1320
ttatcgaaaa gagatttgtt ttttgaacat caaacctcct gtggcattat atctggagac   1380
tggaagttgg ttcgggctaa tggtaagcag ccgtgggagc tgtttaacct gttacaagat   1440
ccgtttgaac agaacgattt atctgcccgt tacccggata gagtgaaaac attggaaaaa   1500
aagtggaatc aatgggcaga aaaacaacag gtatttcctt ttgaatacag accatggact   1560
aagcgtatca attattataa atccctgtat cccgatcaat ccggaaagga tttatga      1617
```

```
<210> 521
<211> 1017
<212> DNA
<213> B.fragilis

<400> 521
aagaagagaa aaaataagaa tataatgaat cgagaagaat gggtgaataa gggattcgtt     60
gacgagcccg tagacaaaag cattgatctg aaagcagcca tcaatgaact gaaaaaagaa    120
aagaatgcag taatcttggg acactattac cagaaaggcg aaatacagga tattgccgac    180
tacattgggg acagtctggc tttggctcaa attgcagcca aaaccgatgc ggatattctt    240
gtgatgtgtg cgttcatttt tatgggagaa accgcaaagg tgctttgtcc ggacaagaag    300
gtgctggtgc ccgacttgaa tgcaggatgt tcgttggcag acagctgtcc ggcagataag    360
tttgctgagt ttgtgaaagc acatccggga tatacggtga tctcgtatgt gaatacaacg    420
gcagctgtga aagcggtgac agatgtagta gtgacttcga ctaatgcaaa acagatcgtt    480
gaaagtttcc cgaaagatga aaagattatt ttcggcccgg atcgtaacct gggaaattat    540
atcaattcga ttacaggacg tgaaatgctg ttgtgggacg gagcttgcca tgtgcatgaa    600
cagttttcgg tggagaagat tgtagaactg aaagcacaat atcccgatgc ggtagtattg    660
gcgcatcccg aatgtaagag tgtggtatta aagttggccg atatggtggg atctacagcg    720
gctttattaa aatatgcagt gaacagtgac aagcaacggt tcattgtggc cacggaggca    780
ggtatcttac acgagatgca gaaaaaatgc cctcaaaaaa cattcattcc ggctcctcct    840
aacgatagta cctgtggatg caatgaatgt aacttcatgc ggctgaacac gctggaaaag    900
ctctataatt gccttaaata cgaattcccg gaagtaactg ttgacccgga agttgccaga    960
gaggcggtaa agccgattaa acggatgctg gagatttcag ctaagttagg cttataa      1017
```

```
<210> 522
<211> 1425
<212> DNA
<213> B.fragilis

<400> 522
aacactatga agaacaaatt atttatttta tttgcatttt gtatttcagt ccatgtttat     60
gctcaacagc cctccaggga gatacctttta aaatatggag ctaccaatat tggcaaacgt    120
```

```
caggatgatg ctatgaagcg gtttcgcaac aatcgcttgg gagagtttat tcattgggga      180
ctgtatgcta ttcccggtgg cgaatggaaa ggtaaagtat ataatggggc tgccgaatgg      240
ctgaaatcat gggctaaagt ccctgctgcc gattggctgg aattgatgaa acaatggaat      300
cctgttaagt tcgatgccag acaatgggcc cggatggcca aagagatggg agtgaaatac      360
gttaagatta cgacaaaaca tcatgaaggt ttctgtctct ggcccagtca atacagtcag      420
tataccgtag cgcagacgcc ttatagaaaa gatatcttag gtgaattggt gaaagcctac      480
aatgatgaag gtatcgatgt acatttctat tttttcggtga tggattggag tcatccggat      540
tatcgttatg agattacatc gaaagaagac agcattgctt tcagccgttt tctgactttt      600
accgaccatc agttgaagga actggctacc cgttatccga cagtcaaaga tttctggttt      660
gacggaactt gggatgcaag tatcaagaag aacggttggt ggacagctca tgccgaacaa      720
atgctgaaag aacttgtacc gggagttacc gttaatagcc ggcttcgtgc cgatgattat      780
ggtaagaggc actttgacag taatggccgt cttatgggag attatgagtc gggatatgaa      840
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accccgatag aggtgatcga tcgcattgtc catgcggtgt cgatgggagg aaatatggta     1020
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gcattggggt gctggatgaa gaggtatggt gaatgtatat atggatgcga ctatgccgga     1140
tgggataagc aggactgggg atactatacc cgtaaggggc aagaggtata catggttgta     1200
tttaatcgcc cctattcggg gcttcttaaa gtaaagatcc ccaaaggtac cgaaatagaa     1260
agagccgttt tgccggatgg acaggtggta aaggtaactg aaactgcccg gaatgaatat     1320
aatgtggcca tgccttcgca agatccgggt gagccgttta taatcaaact acaagttaag     1380
gaggcttccg gagcagcaga cggatatcgg gacgcattaa cgtaa                      1425
```

<210> 523
<211> 915
<212> DNA
<213> B.fragilis

<400> 523

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cagcagccga agagcaaggt atcgatgtgc ctacttatcg ggaagttgct aaaaaattca       60
tcaaacaata aagaaatcaa tatgaacaac cttctttat ctatcaactg gaacccaaat      120
ccggaattat ttaatctttt cggcatctca atccgttatt acggactatt gtgggctatc      180
ggaatattct ttgcttacat agtggtacac tatcaatatc gtgataagaa gatagacgaa      240
aagaagttcg aaccgctttt cttttactgt ttttcggca tcctgatcgg ggcacgactg       300
ggacattgcc tgttctatga tccgggatat tacctaaatc attttttggga aatgatactt      360
ccggttaaat ttcttccggg aggtggatgg aagttcacgg gttatgaagg actggccagt      420
catggaggta ccctcgggct gatcatttct ctctggctct attgccgcaa aacgaaaatg      480
aattatatgg atgtggtaga tatgattgcc gtagccactc ctattacggc atgtttcatt      540
cgccttgcca atctgatgaa ttccgaaatc ataggtaagg taaccgatgt atcctgggca      600
ttcgtttttcg aacgggtaga catgcaacca cggcatccgg cacaacttta tgaagcaatc      660
gcctatttta tcctcttcct ggtaatgatg ttcctctata gaactatag caaaaaacta       720
catcgggggt tcttcttcgg actttgcctg acagctatct tcactttccg cttctttgta      780
gaattcctga aagaaaatca ggtggatttc gaaaatagca tggcactgaa catgggtcaa      840
tggttaagca tcccgttcgt aattatcggc atttacttta tgtttttcta cggaaagaaa      900
aagagtgtaa aatga                                                       915
```

<210> 524
<211> 735
<212> DNA
<213> B.fragilis

<400> 524

```
catggcactg aacatgggtc aatggttaag catcccgttc gtaattatcg gcatttactt       60
tatgtttttc tacggaaaga aaaagagtgt aaaatgaaac atataattga tattaaaacc      120
tgggaaagaa aagaaaatta tgaattttt cttggtttcc agaatcccac tatctccatt       180
acttcagaag tagaatgttc gggtgctaga acacgtgcca aaaccgccgg agaatccttc      240
ttcctgcact acctttatgc cgtgttgcgt gctgtcaatg aaatcaaaga gttccgattc      300
cgcattgatt ctgaaggacg ggtagtttat ttcgatacag tggatatgct gactcccatt      360
aaagtggcag ataacggacg ttttttttaca gtacgacttc cctggtatcc tgattttaag      420
```

```
actttctaca cagaagccaa agccatcatt agcggaatag atccggataa agatccttat    480
gaagcagaaa agacaggagg tagtgattta ctggatgtag tgctcctcag cgctactccc    540
gatttatatt tcacctcact gacttgtacg caggaacatc gtcacggtgg taattacccg    600
ttaatgaatg cgggtaaagc cgttataaga ggtggtgtat tagtgatgcc catcgctatg    660
accattcatc atggatttat agacggacat cacttatctc tgttttataa aaaggtggaa    720
gagtttctta aataa                                                     735
```

<210> 525
<211> 1884
<212> DNA
<213> B.fragilis

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<400> 525
gcttataatg aaaataaaac aaagacagga aaaaataaag gagatacaga agcggataga     60
aaatttataa aaacaccggt tatgaaatac tttatattat tggcatcggt tctttttttta    120
gcgcaatctt gttcggttgc gccctccatg cgtgaatccg cccgatcgta cgactgggtt    180
gcaaacacta attttttcctg gcaatcaaaa atagacagcg cgatcagctc ttatccgctt    240
ttattgcatc cgtcatatga agctaaaggg agcgtggggt tcacggtacc ggttttttat     300
cgtatggata aaaagcgggt gggtgttgaa gtgaggataa agtataaaac ggaaaactgc     360
aatgatctgt gtttgaagct gagcggcatt ggtgaatgcg ggaaggtcat ttccgcggac     420
acgtttcgat tgtctgccgc cgaggcgtgg acggtagccc gccggagcgt ggatatggct     480
tctcccctgt tgctggggggt ggctcttgaa gcccgcgggg agaagcccgg gaaaaaggat    540
tttccggccg atcctttagg atgggagaat aattccttta gcccggggga atactctaaa     600
atatggattg actccttgga tatcttaatt gatggaaaat atgcggttga actcccatcc     660
ttgaataacg gcacggcggc ttccgtccgg gaatcggatg tgatgcccgc taacggcggc     720
gatcttaagt ccctgcccctt ttccggtaaa aggatactcg ccatcgggga gagcgtgcat    780
ggcaccggaa cgatgaatga catgggtgtt gaaataatca agaacaggat cgaacacgga     840
aaatgcaggc tcgtcttgtt ggaaataccc ctgaccttat ctttccatat caaccggtat     900
ttggaggggg acgagcggtt caagccggac agcatcgctt cctattttga caaggtctta     960
ttttcttctt catccttcgt gtctcttatg cggtgggtca aagaatacaa ccggcatttg    1020
gaagaaaagg tgagcttctt tggcattgac cggaatattt accgcttaca aagcagtatc    1080
gacctgtttt acttctttta cacgctccgc agaggtaaag gcgacgaagg cttgaaagcg    1140
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ttgcatgcca atcatggctt caagggcata cttacccggc gggaagcgga ataatgagc    1260
tactgcctga attcggagga ggaagcgacc gctgatgaac tgaatcgttt tcggggcagg    1320
gattccggca tgtacgagaa tgcgaagttc ttaatgaaaa caatgcttaa aaaagatgaa    1380
acgactaccg tatattgtca tttggggcat gcgaattata caagtatcgc tggatggctg    1440
agaccggaca tgcgaccttt cggagaatac atgaagggtt catacggtga tgactactcc    1500
gccgtgggac tgcttgccgg agggggaagt tatctgacat gggtatttcc cggtaaaatg    1560
ggaataaggc gattgcagtc ttcgtcgtct gctggattag aatactgtat cgaacgttcg    1620
ggtatcagtc cgtgttattt gccgatggat aaactgtccg atgcggatgt tttgaaaatg    1680
agatatatag gaaatacaga atcgaaaatt ggacaattcc agtgggtttt tccaaaatgt    1740
atgatggacg gagtgctgtt cacaaaaaac gcgtccgcca caaataagag ggaagagttt    1800
tttaaaatga acttagacta tcatgtccaa actttatttg ctcttatgta tttgtatgaa    1860
aagaaaagaa aatggattcc atga                                          1884
```

<210> 526
<211> 1125
<212> DNA
<213> B.fragilis

```
<400> 526
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ggtaagtcaa cactttttaa ttgtctgtcc aatgcgaaag cacaggcggc aaacttccct    120
ttctgtacaa tcgaaccgaa cgtaggcgta attaccgtgc ccgacgaacg tttaaataaa    180
ctggctgaac tggtacaccc caaccgcatc gtccccacaa cagtagaaat cgtagatatc    240
gccggacttg tgaaaggtgc cagcaaaggt gaaggactgg aaacaagtt cctggccaat     300
attcgggaaa ccgatgccat cattcacgta ctccgttgct tcgacgatga caatgtaacc    360
catgtggacg gaagtgtaaa tccggttcgc gacaaggaaa tcatcgatta cgaattacag    420
```

```
ttaaaagacc tggaaaccat cgagagccgt atccagaaag tacaaaaaca agctcagacc        480
ggaggagata aagccgccaa acaagcttat gatgtacttg ttcaattcaa ggatgcgttg        540
gaacagggca aatcggcgcg tacggtaacg ttcgaaacaa aagacgaaca gaaaatagcg        600
aaagaattgt tcttactcac cagtaaaccc gtaatgtatg tttgcaatgt ggacgaagca        660
agtgcggtaa atggaaacaa atacgtagac atggtacgtg aggcagtaaa ggacgaagac        720
gccgaaatcc tggtagtagc cggaaaaaca gaagctgaca tcgccgaact ggaaacctac        780
gaagaccgtc agatgtttct tgccgaaatc ggcctggaag aatcgggtgt ggcacgtctc        840
attaaatcgg cctacaaact gttgaacctg agacttatt tcactgccgg tgtacaggaa         900
gtacgtgcct ggacctacga aaaaggatgg aaagctccac aatgtgccgg agtgatccat        960
accgactttg agaaaggttt tatccgtgcc gaagttatca aatacgaaga cttccttcaa       1020
tatggctcgg aggctgctgt caaagaagcc ggaaaattgg gtgttgaagg aaaagaatac       1080
gtagtacagg atggagatat catgcatttc cgtttcaatg tataa                      1125
```

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<210> 527
<211> 2208
<212> DNA
<213> B.fragilis

<400> 527
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gattcgcaag actgcggacc tgcatccctt aaaattattg ctaagcattt tggtaagttt       120
tactcattgc agttcatgcg tgaccgttgc ggcattacca agaaggtgt atcgttactt        180
gatctaagta ccggggcaga aagcatcggg ctgcgaacgc ttgccataaa atgtaccatt       240
gatgatgtgg tgaacagcat tccgtttcct gcaattgtgt tttggaatga cagtcatttc       300
atcgtggtat atcattctga taggaaatac atatgggtct cggatccagc aaaaggacgc       360
ataaaataca cgcatgaaga atttcgaaag ggttggtatc aaagggatga aagccaaggt       420
gtattacttg ccgtggaacc aactactgat tttaagaata gtaaagctga acaagaacag       480
aagagaaaca gcttttcgag cattcttaaa tattttttc catataaaaa gagcttcggg        540
ttaatattta ttattatgct cgttgttact gtcttacaag gtatgttacc atttatctct       600
aaagcggtga ttgatgtcgg cattaaaact tcggacagga actttattaa tatggtactg       660
ataggggaaca tctgtatctt gttgagtgta atgattttca atgtgttgag ggattggatc       720
ttattgcata tcacggcgcg agtaaatatt gctttgattt ctgactactt gataaaattg       780
atgaaactac ctgttacttt ctttgagaat aagctgctgg gcgatatttt gcaacgggca       840
caagatcatg aacgtatacg cagtttcatt atgaataatt ctttggcatt gatattttca       900
acgcttacat ttgccgtctt tagtattatt ttattgattt acaatactat aattttctat       960
atatttttat caggatcggt tctgtacgct tgttgggtgt tactgttttt gagcatacgt       1020
aaaaaactgg attgggaata ttttgaactt ttgtccaaaa accaaagcta ttgggtggaa       1080
accgtttcga ctatacagga tatcaaaatc tacaattatg acaagtaccg gcggtggaaa       1140
tgggaagaaa ttcaggcacg gctttatcat gtcaataagc gtgttcttgc cataaccaat       1200
gctcaaaatc tgggtgccca atttatagaa aatatcaaaa atatggctat cgtgtttttc       1260
tgtgctatgg cggttatcaa gggtgaaata acatttggaa taatgatttc tacacaattt       1320
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tatgccaaaa tcagtttctt acgcatcaac gagattcgtc agttggaaaa tgaggatgaa       1440
ttactttcta ttggcagtac aaccatcctt ccggaaagaa aaacgattct attagagaat       1500
atacattttc aatacacgcc taactctcct ttggttctgc gtaatattta cttacaaata       1560
ccggaaaata aaatcacggc aattgtggga ggaagtggta gtggtaagtc aactcttctg       1620
aaactattgg ttcggcttta taagcccagc catggagaaa taaaaatgga caagatgaat       1680
gtaagtgcca ttaatctacg ccaatggaga aacatgtgtg gggtggtaat gcaagatgga       1740
aaaatattca gtgataccat cttgaataat attgtattag atgatgaaca aattaattat       1800
acgcgtttga gggaagtttg tcgtatcgct cagattgagg atgagataaa cgcgatgcct       1860
aagggttttg aaacgaccat ggagaaacc ggacgcgggt tgagtggagg acaaaagcag        1920
cgtttgttga ttgctcgtgc gctgtatcgg gatccgaaat ttctctttat ggacgaagcc       1980
acaaactctt tggattcaat aaatgaacga aaaattgtga atgccttgaa caatgcattt       2040
gaacagcgta ctgttgttgt tattgctcac aggcttagta ccattcgtaa tgctgatcaa       2100
attgtggtgt tggacaaagg tttttatcgtt gagaccggaa ctcatgaaat attgatggag      2160
aaaaaggggc attattttga gttggtttct tcacagatac aagattaa                    2208
```

```
<210> 528
<211> 1194
```

<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (130)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 528

```
ctaccattac tgcgcttggc ccggccggac gcagatgaac cttttcgtac tgaagtgtgg      60
tataaaggta caatagaaca tgatacactt cgaggagata tctatgtggt tggcggattc     120
gatccggagn ttgatgatga aagaatgaat gcattggtag aagaggtgat tactttccct     180
ttctcggtat tgaaagggaa tatctacgga gatatatcga tgaaagattc tctctattgg     240
ggaagcggtt gggcatggga tgatactccc tcctctttc aaccttatct atcaccatta      300
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gcacgtttaa gctttgagcc gtcatcgtct tattatacta tgaccaatga aactaaaaca     420
cgtacatcct ctgccggtaa gttttctgtg tcaagaggtt ggttggaaaa taaaaataat     480
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aatcattatg ctttcgacag tttccggtct gacagtcttt ctatctgtat ggcacgttgg     660
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gaagcactgc tttgccgttt aggtgcccgg cccacaggta agaagcaggt ttcggctaag     780
gacggaattg aggaaatata tcggttgatt caggatttgg gacatgatcc ggataactat     840
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gattttctga agtttgctta ttcgcggaca gatattttcc ggaaattata taaggccctt     960
ccggttgcag gcatcgatgg aacattaaaa aatcggatga aacaaggggc ggcgtttaag    1020
aatgtacatg ccaagaccgg ttcttatact gctatcaata cattagccgg ttatcttaag    1080
atggctaatg acaccaagt ggctttgcc ataatgaacc agaatatact ttcagccgct      1140
aaagcaagga attttcaaaa taaagtatgt gagatactgg caaaccatca atga          1194
```

<210> 529
<211> 1584
<212> DNA
<213> B.fragilis

<400> 529

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acactaaaac ttatggttaa aaagttcgat ttcctcgtaa tcggttctgg tatcgccgga      60
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ctggaagaag caaacactta ttttgcccaa ggaggagtgg cctcagtgac caatctgctg     180
gtagacaatt ttgaaaaaca tattgaagat acaatgattg ccggtgactg gatcagtgac     240
cgtaccgctg tagaaaaagt cgtacgtgaa gctcccgcac agatacaaga actgatcagt     300
tggggtgtaa acttcgataa aaacgaaaaa ggagagttcg atcttcaccg ggaaggaggt     360
cattcggagt ttcgtatcct gcaccataaa gataataccg gcgccgaaat tcaggatagc     420
ctgattcgag ccgtacaaca acatccgaat ataacggtta ttgaaaatca ttttgccatc     480
gaaatcctga cacaacacca tttaggagta accgtcaccc gtcagacacc ggacatcaaa     540
tgttatggag cctacatact cgatccgaaa acaggaaag tggatactta tctggccaaa      600
gtgacattaa tggcaacagg tggagtaggg gctgtctacc agactacaac caacccgctt     660
gtagcaaccg gcgacggcat tgccatggta tatcgggcaa aaggaaccgt aaaagatatg     720
gaattcgtac aattccaccc gacagcgctt taccatccgg gcgatcgtcc ttctttcctc     780
attaccgagg cgatgagggg atacggtggt gtacttcgta ccatggacgg gaaagagttc     840
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gataatgaaa tgaaaaaccg tggagacgac cacgtctacc tcgacgtaac tcataaagat     960
ccggaagaga ctaaaaaaca cttccccaat atatacgaga agtgcctgag cctgggaatc    1020
gatattacca gagaatatat ccctgtagca ccatcggctc attacctttg cggaggtatt    1080
aaagtggatt tgaatggcca atcttctatc gagcggctat acgctgccgg cgaatgttcg    1140
tgtacaggtt tgcatggtgg caaccggttg gcttcaaact cactgataga agcagtggtt    1200
tatgcagatg ctgctgccag acattgttta tcggttatcg accaatatac ttataacgaa    1260
gaaattccgg aatggaatga cgaaggtacc cgctcaccgg aagaaatggt acttattact    1320
caaagcatga aagaagtcaa tcagatcatg agtacctatg taggtatcgt ccgcagcgat    1380
```

```
ctccggttga aacgtgcatg ggatcgtctg gatatcttat atgaagagac cgaaagcctt    1440
ttcaagcgta gcgtagcatc taaagaaata tgtgagctgc gtaatatgat caatgtaggt    1500
tatctgatta tgcgtatggc catggaacgt aaagagagcc gcggtcttca ctacacggtc    1560
gattatccgc atgccggtaa atag                                            1584
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<210> 530
<211> 786
<212> DNA
<213> B.fragilis

<400> 530

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acagaattaa gtatgactat tattttttcct tctcctatat tcggaccggt tcattcacgt    60
cggttagggg tctcacttgg aataaatttg cttccttcgg acggaaaagt atgttctttc    120
gattgcattt attgtgaatg tggttacaat ggtgaacatc gtcctaaatc ttcattaccg    180
acccgtgaag aagtccgtat ggctctggaa gagaaattaa aagagatgaa aagcaacgga    240
cctgctcccg acgtactgac tttcgccgga aacggtgagc cgactgctca tcctcacttt    300
ccggagatta tcgaggatac acttgctttg cgtgatgctt actttccgga tgcaaaggtg    360
agtgtgctca gtaatgctac ttttattaac cgtccggctg tattcgatgc gttgaacagg    420
gtggataata acattttaaa gttggacacg gtggatgaag agtatatccg gactgtagat    480
cgtccgaacg gacgatacga tctgaatgga acagtcggac ttttaaaagc ttttaaaggt    540
aattgcatcg tgcagactat gtttatgaaa ggaaaatata aggggaaaga tgtggataat    600
acttctgaca agtatgtact tccctggttg aaagttgtaa aggatattgc cccaagacag    660
gtgatgattt atacgatcga tcgggaaact cccgatcagg acttgcaaaa agctactcat    720
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tattga                                                                786
```

<210> 531
<211> 2679
<212> DNA
<213> B.fragilis

<400> 531

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tccgtgagca atgatattga attaaccccg atgatgaaac agtttcttga cctgaaggct    120
aagcatccgg atgcagtgat gctgttccgg tgcggagact tctatgaaac ttattctacc    180
gatgcgatta ttgcagctga atattagga attactctca caaaacgtgc caatggaaaa    240
ggtaaaaccg ttgagatggc gggatttccg catcatgcgt tagatacata cctgccgaaa    300
ttgatccgtg caggtaagcg ggtggccata tgtgaccagc ttgaagatcc taagacaacg    360
aagaaattgg tgaagcgtgg cattacggag ttagttactc cgggtgtttc gatcaatgat    420
aatgtcttaa attataagga aaataacttt ctggcagctg ttcattttgg aaaatcggct    480
tgtggtattg catttctgga tatttctacc ggagagttcc tgacggctga aggacctttt    540
gactatgtag ataagctgct gaataatttt gctccgaaag agattctttt cgaacgtggg    600
aaacgcggaa tgtttgaggg aaatttcgga agtaagttct ttacttttga actggatgat    660
tgggtatttta ccgaatccag ttcccgggag aagttgctga gcattttga aacaaagaat    720
ctgaaaggat cgggggttga gcatctcaag aatggtatta tagcttccgg agctatcctg    780
caatatctgg atatgacgga acatacacag gtaggacata tcacttcgct ggcacgtatc    840
gaggaagaca aatatgtgcg tcttgataaa tttacagtgc gtagcctgga gttgatcggt    900
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gacgaactgc atcggatcgg agatttggaa cgtatcattt caaaagtagc cgtcgggcgt    1140
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gcttattctg gcaaagatta tctgcttaag atacagcaac gtgaaagtga actgacagga    1440
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gtgcataaag ataaagtgcc gcaagagtgg atacgtaagc agacgttggt aaatgcggag    1560
cgttatatca ctcaggaact gaaagaatat gaagagaaaa ttctgggtgc cgaagacaag    1620
```

```
atcctggtat tggagactcg cctgtataca gaacttgtac aggcattgag tgaatttata    1680
cctgccatcc agatcaatgc taaccagata gcccgcattg actgcctgct ttcatttgcc    1740
aatgtagcca aagagaacaa ttatatccgc ccggtgattg aagataatga tgtattggat    1800
attcgtcagg ggcggcatcc ggtaattgaa aagcaactgc ctatcggaga aaaatatata    1860
gctaacgatg tgttgttgga taacgctacc cagcaggtta tcattattac cggtccgaat    1920
atggccggta agtcggccct gttaaggcag actgcattga tcaccctgct tgcccagatt    1980
ggttcgttcg ttccggccga aagcgctcat atcggattgg tagataagat ttttactcgg    2040
gtcggtgcca gtgacaatat ctctgtagga gaatctactt ttatggtcga gatgaatgaa    2100
gcgtctgata ttctgaataa tatttcttcc cgaagccttg tcctgttcga tgaattggga    2160
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atggagaaat cctttaagcg tattaagaat tataacgtat cggttaagga ggtggataat    2340
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caactcgaat ctgacaaccg ccagcaggga atttcgggta agccgctggc agaagtcagt    2520
gagaatcgcg gaggtatgca gttgagtttc tttcagcttg atgacccgat cttgtgtcag    2580
atccgggatg aaatacttca tctggatgtg aataatctta ctccgattga ggcattaaac    2640
aaactgaatg atatcaaaaa gatagtcagg ggaaaataa                          2679
```

<210> 532
<211> 1800
<212> DNA
<213> B.fragilis

<400> 532

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cctttagaat ataggtgggt taatcatccg ctggatttct atctgaatgt gaccgtagac     180
agtaccacta ctccccattc attgttattt gaaacaatgt atgaaaaaaa aggaattgca     240
agcttttac tacctatcta tcaactggag aagaatagcc ttacttttga gattaagatc     300
agatataaaa cggaaaattg cgagaatcta ttcttggcaa ttacctctgt cggcgattgt     360
gagaacataa attccattga taccattcaa ctgaacgcaa cccaagattg gaaggagtgt     420
acgcggattt tgaaaacaaa gaaagcatat tttttaaata tatctgttgg ggctgtcggc     480
tacggccaac gcaagggcaa gatatggatt tctgatttag aggtgctggg tgatggaaaa     540
gcaatcgggg acaacccca acaggaatat aaaaaagaag atattcattt gaaagcaacc     600
gatctgattc attggaataa caaagagtat gacaaccttc ctttcttaaa taagaaaata     660
cttgggcttg gagaaacggc gcatggcaca gaaacgatga acgacatcgg cattgaaatt     720
tcaaaggaac ggattctgaa acaccaatgt cggtttattt tgctcgaaat ccggttggaa     780
ttttcccttt acatcaatag atacgtgcaa aatgacaaaa attttaaatt tgaatatatt     840
tcagaacgtt ttgaaccata cctgttttcc gactccatct tatcctttat ccggtggatt     900
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acaccactat tgagcagagc agatttattt aatttttttct ataacctgaa gtcgggcggg    1020
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aaaattattt ctaagttcga caaaagcatc cgtttagcag attgtttgga taaaggcgaa    1140
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tttgttgaaa gggatagata tatgaatgat atcgtaacat tcattattga ccatttttctc    1260
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aattattcat gtattggatt gatcactaac cgaggcactg caatgcttcc ggtatctgct    1440
acaaacggtg gagtaacaaa gttggaacag gcaccgcagg gaagtttgga atttcaagta    1500
aacaaattga aaatggactc ggtttatttg tcaatgagca agtttacttg ttcggatgta    1560
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ttccagtata tgatcccgaa gtcaagaatg gaaggcgtta tttttacaaa agaatcagtc    1680
aatttcatga aagggaaaga attttttcaaa aaaaatatga acgttgaagt tgttacaatg    1740
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<210> 533
<211> 1413
<212> DNA

<213> B.fragilis

<400> 533

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caaatgaatg tggcagatag tgaagtaatc gcctctgtga tgcaaatggc gggttattcg   180
gttgccgaaa cgctggaaga ggctgatgcg gtgtttatga atacctgttc tatccgtgac   240
aatgccgaac agaagatttt gaatcgtctg gagttctttc attcgatgaa gaagaaaaag   300
aagcacctta ttgtaggtgt attggggtgt atggccgagc gggtaaaaga tgatctgata   360
gaacaccatc atgtggacct tgtagtagga ccggatgctt atctgactct tcctgagttg   420
attgcttcgg tagaggccgg tgagaaggca atgaatgtag aactttcgac tactgaaacc   480
taccgggatg tgattccttc gcgtatctgt ggtaaccata tctccggatt tgtatccatc   540
atgcgcggat gcaataactt ttgtacctat tgtattgtgc cttatacccg tggacgtgaa   600
cgtagccggg atgtggagag tatattgaat gaagtggccg atttggtatc aaaaggttac   660
aaagagatca ctctgctggg gcagaatgta aactcttatc gttttgagaa ggagggggg    720
gaagtagtta ctttcccaat gttacttcgt ctggtggctg aggctgcacc gggaatacgt   780
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aaacgtattg tgcccgattg cggacttact accgatatat tttccggctt ccattccgaa  1020
acggaagaag accatcggga atcactttcg ttgatggaag cttgtggtta tgatgcagca  1080
tttatgttta aatattcgga gcgtcccggt acttatgctt ccaagcatct ggaagacaac  1140
gtttccgaag agataaaagt ccgtcggctg aatgaaatca ttgctttgca gaatcgtttg  1200
tcggccgaat ccaataatcg ttgcatcggt aaaacgtacg aagtgttggt tgaaggtgtt  1260
tcgaagcgtt cacgcgacca gctgttcggc cggaccgaac agaatagggt agtggtattc  1320
gaccgcggta cccatcggat aggtgatttc gtgaatgtga gaatcacgga ggccagttct  1380
gccacattga agggtgaaga agtcttcagc taa                                1413
```

<210> 534
<211> 687
<212> DNA
<213> B.fragilis

<400> 534

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aagaacatca taagaataat gggaacaaac aacagtgatt tttatctgcc tgtatatgtc    60
attaacctta aagagcgcac ggaacggcgg cagcatatag aggaacagtt tcaagggaag   120
gtagagtttg ctctccattg gatagaggca atcgaacatt ccattggagc agtaggatta   180
tggcaaagca tgctaaaggc tgtacaaaca gctatcgaca aaagggatga tatcatgatc   240
atttgcgaag acgaccatat atttaccccc gcatataaca aagattattt gtttgccaat   300
ataataggag caaacgctca aggttccgag ttgctttcgg gaggtgtcgg aggatttggc   360
acagcggtac cagtggacac aaatcgctat ggatggatt ggttttggtc tacgcaattt     420
atcattattt ttaagccgct atttcaaaag atattagact atgacttcaa agacactgat   480
acggcagatg gagtttttatc tgtccttgct aaagataaga tgactatcta tccgttcatc   540
tccgttcaaa aagattttgg ctattcggac gtaaccgtct acaatgggac tccggggatg   600
ataagcaact attttttctca ggcaaactac cgcttgagaa tgatacatca tgttagtcat   660
aaatttaaag aacaggcaaa aagatga                                       687
```

<210> 535
<211> 717
<212> DNA
<213> B.fragilis

<400> 535

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aatactgcca tcaattatag ttccgaatgg gcaaagcaaa gcacaataaa ttattatgat    60
atagagccgg gtaaaattca tgtagtggaa tttggggcaa atatccctac tccttcagac   120
tataaaatag atatacagac agatatttgt aatttagtct ttatcggaaa aaattggcag   180
aaaaaaggtg gagataaagt tttaggggca tatagaaagc ttaaatccga tggatttcga   240
tgtacgctta cgattattgg ttctattatt cgggaacctt atgatgaaga tgagaattta   300
gttataattc cttatttaga taaatcccaa ccggaacatt tggaaagatt ttgtaatatc   360
```

```
ttgcaggaag ctcatttttt agtacttcct acagagttcg acgcatttgg aattgtgttt    420
tgtgaagcat cggcttatgc tgtacccagc attgccgcca atgtgggtgg agtgagtcaa    480
ccggtacgtg aagggaaaaa cgggtatttg ctcatgccgg atgctacagc tgaagattat    540
gctgagaaaa taaagtcggt tttcgctgac aaagaaaact atctgaaact ccggatgtca    600
tcgcggcaag aatttgaaac ccgtcttaat tgggaggtat ggagcgagaa agtaaataaa    660
atattggaag aaattgtaga agaacatcat aagaataatg ggaacaaaca acagtga       717
```

<210> 536
<211> 285
<212> DNA
<213> B.fragilis

<400> 536

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ggtcgcttcc tcctccgaat tcaggcagta gctcattatt tccgcttccc gccgggtaag    120
tatgcccttg aagccatgat tggcatgcaa cacagagtcc gcccctttaa aagggaactt    180
ctcgtccgac aacagaagag actcgcatat cgctttcaag ccttcgtcgc ctttacctct    240
gcggagcgtg taaaagaagt aaaacaggtc gatactgctt tgtaa                    285
```

<210> 537
<211> 267
<212> DNA
<213> B.fragilis

<400> 537

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cttgtaagca ttatgaagaa actgaactta tttattttat tctctttttg tttttcgatt     60
atcacttggg gacaagccaa ttttgcagcg attgattcac ttattaaaaa agaactgcct    120
caaggttcgg aggttggtat ttccgtgtat gacctgactg cccgaaagac actttacacc    180
tatcgtgata ccaaactttc gcgtccggca tctaccatga aacttttgac taccattact    240
gcgcttggcc cggccggacg cagatga                                        267
```

<210> 538
<211> 1689
<212> DNA
<213> B.fragilis

<400> 538

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aagaaggaaa tgaaagtgtt ggatttcaaa ccaaggttat tctctacctt gaagaactac     60
tctaaggaaa cgtttatgtc agatctgatg gcaggtatca tagtaggtat cgtagcctta    120
cctctggcca tcgcattcgg tatcgcatca ggtgtatcac ccgagaaagg aattattaca    180
gctatcattg caggattcat catctctctg ctcggaggaa gcaaggtaca aatcggagga    240
ccgaccggag cattcatcgt catcatttat ggcatcatcc agcaatatgg agaagcggga    300
ttaatcgtag ctacactgat ggccggcata ctcctgatcc tattaggagt atttaaattg    360
ggagcgatta ttaaatttat tccctatccg atcattgtag gctttaccag cggtatagcc    420
gtcactattt ttacaaccca gattgctgac atattcggat tgaatttcgg tggagagaaa    480
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tcagaattgc ccgaagcagc catacccacc ctcaactggg aagccatcaa ggatttattc    780
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atgactaata tcaataatgg cggtaaaaca ccggtagccg gtatcattca tgctatagtt   1020
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cgtgtgatgg aaacaaccga gatatctgtc atcaaagatg aaatcgatcc gaatgacgaa   1320
```

```
ctggacattg ccgtatgcga agagcatctg ataatccctg ccggcgtgga ggtatatgaa   1380
attaatggtc cgtacttttt tggtattgcc accaaatttg aagaaacaat ggcacaattg   1440
ggtgaccgtc ctaaagtacg catcatccgc atgcgtaaag ttccattcat cgattcgacc   1500
ggtattcaca acctgaccag cctttgtaaa atgtctcaaa aggaaaagat cactatcgta   1560
ctctcgggag taaacgagaa agtacacaaa ccccttgaga agtcgggctt ctatgaatta   1620
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ataaattaa                                                           1689
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<210> 539
<211> 2433
<212> DNA
<213> B.fragilis

<400> 539

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atattcccat cgttactttt tgccacagaa ccagagtctg tcgatagagt ccctgccatc   120
cgtggagtag tctatgacga aactgatacg ccattggctt cggccactgt ccaaatagaa   180
ggtaccacca tcggaacaac aaccaatagt gaaggccgat ttattctgcg taatctggca   240
cgtaaagttt acaagataaa tgtcagcttt gtaggatatg ccactcaaac ccgtacagtc   300
gatctcacct cgagaagtgt agcgcaactc tcgtttacgc tcttaccgga cgataattta   360
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acccgcatgc ctttacgtcc cagtgaacag atacagagta tttctgtaat ctcagaaaaa   480
tcgattaccg aacagggggc acttaccgta accgatgtcg caagaaatgt acccggagtt   540
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ggtatcggaa acgacctcgg aagtgcaggc ggagtaatca acgtagtaac caaaacaccc   780
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gccttcgaac gttcggataa ttatcgtccg gtcatccatt ccaatcgcgt atacatcaac   960
ccttcattag aatggcgtcc ggatgacaaa acaagcgtta ccatagaaat ggattatctg   1020
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gcatatttcg gctcttcata taaagtggat aatacaagta cttccgtaaa aaccgtagtc   1260
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aaatttgttc ccgaaatccc ggtagaatcc aattcttcaa gttatggaat aatggcacag   1560
gaagtaatga ctttaataa gtatataaag gctatcctgg gactgagata cagttatatc   1620
agcagtcagg acggcacaag tgcaggtccc actaccggag atgcctggaa tccgatgttg   1680
ggcatcatgc tgactccggt aaagaacatt aatttgttcg gttcatatac aactactacc   1740
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cgccagtttg aagtgggcat caagtccgat tggctgaata accgcctgcg ctttaacctg   1860
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caacctaccg gttattttga taaagcggga agtctgaaaa gaaaaggtat tgaaaccgaa   1980
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ggtataggag tctatttcgt aggtaaacgt cctgttaatg attttgcaat caagccggac   2220
ggacacggct ccatgaccaa cgaaaagcct tttgacatgc ccggttatac tacaataaac   2280
gcccagctgg cctatagtat ccacaagttt actgcccgtg tatacctgaa caacctgttc   2340
gatgcattag gatacaattc gtattatcgc ggaggttata tcaatcagat cgatccacgt   2400
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<210> 540
<211> 1119
<212> DNA

<213> B.fragilis

<400> 540
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aagaagtttg tcaaagacag tcgtttcgat gccttttatc actcgaacga gaacttatat   180
caagaggctg taagtcgttt tatgcctatt tacaaaagca tagatacccca atggtataat   240
gatttctacg ggcagaagtc caacgaccgg tttcacatta tactttcaat gtccaatggc   300
ccgggaaatt acggaccgag tgtcaccgac aaggaaaaca tacataatgt cttttcagtc   360
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ccgatcttaa tccacgaatt caaccattca ttcataaact tcgacccgga aatgttccgc   480
acaagcggag aacagattta tgctgcggtt ggcgaacaga tggcgcgcca agcctatgga   540
caatggtcta ttgtccttac cgaagcaatg gtacgtgcgg cagtcataaa atacatgaaa   600
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ataaatgtca actacgccaa tgacaaccgt accgtgatta tcggagtaga attgttaccc  1020
gggaaagagt atggaatcac tctttttagga ctctcttttcc gcactccgga aggagatgcc  1080
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<210> 541
<211> 1122
<212> DNA
<213> B.fragilis

<400> 541
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tctactaccg aatgtcagac tatcgacttc tctacccttt ttgacggcca accggaaaag   180
atcccctttga aagaatgggc aaaatccata cactttgtcc aattagaaac caatgattcc   240
atactgatag gtaatatccg cgcaacaatc ctacataaag acaaaatact ggtacatcac   300
aataatttat ccctttttcga tctgtcgggc aaatttattt gtaacatagg tagcaaagga   360
ggaggtcccca ccgaatatag cggcattaat aatgcttgga cagatgatga aggcattcac   420
attttcgaca tagccaacaa aattaaaaca tataactgga acggaaaatg gataaagacc   480
gaaccgatcc cggaaagcaa tatcaaagaa gtatttcccc ttgcatcagg taataatata   540
aaagccggtt atatacagaa tattaccgga aatgaacctc acaaaattta cctattcaaa   600
gacagcacca tcctggctaa aatacccctat ggcaaatcct ttcaaaaagg agagatgaca   660
atggtattct acaatgaatg ctatccattc catgcaaatg gccggacttt cttttaaagag   720
atgttcaacg ataccatttt ttccatcgat aatcaatatc aacccgttcc acgttggtac   780
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tcattcatac ctaagtgtat gtctgacgac ggaaaatatc tgatttcgta tgaaatacag  1080
gagaatgatg aaaacccggt gatcatatta gcggaaaaat aa                      1122
```

<210> 542
<211> 2898
<212> DNA
<213> B.fragilis

<400> 542
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aaccatacct accaggtaaa tgaagatgca tccaaacaaa aattctatgt actcaatatg   180
ttcccctatc cttcgggtgc cggactgcac gtaggtcatc ccttgggata tattgcctca   240
```

```
gacatttatg cgcgctataa acgcctgcaa ggatttaacg tattgaaccc gatgggatat    300
gatgcttacg gactgccggc cgaacaatat gctattcaaa ccggacagca ccctgcaatt    360
accactgtta ataacatcaa ccgctatcgt gaacaattag ataagattgg tttctctttc    420
gactggaatc gtgaaattcg cacttgcgat ccggaatatt atcattggac ccaatgggca    480
tttatcaaaa tgttcaacag ctattattgc aatgatgaaa acaggcacg tcccatcgaa      540
gagttaatag aagctttag taccaacgga acacaaggta tgaacgtagc ctgtggcgaa      600
gaaatggact tcactgccga cgaatggaat gctaaaagcg aaaaagaaca acaggaaatc      660
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ggtaccgtac ttgccaatga tgaagtagtt gacggtgttt ccgaaagagg cggttatccc      780
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gatccgcgca atcacgaagc tctcgtttct cccgccgtgg atcagtactg gaaaaatgta     1860
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atcgtatcca acgatatcct cgacctggaa gctttcaagg cttggagacc cgaatacgaa     2160
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gagcaactca tcgtagttct tgcacctttt gctccgcatg tatgcgaaga gttatgggat     2640
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gaatttccgg ctgatgccgc cagcgatgcg attcaagcca ctgtacttgc cgacgaacgc     2820
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gttaacattg ttatttaa                                                   2898
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<210> 543
<211> 753
<212> DNA
<213> B.fragilis

<400> 543

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aaagataaca ctgtggcgat tataaaagag tatgagccat tgtttaatgg gcgcctgaag    180
tggattagtg aaaaggacaa tggcttgtat gatgcgatga ataaaggttt tcaaatggca     240
acaggagatg tgattgggat tattaattct gacgatttaa tatctgatcc taatgcaatt     300
gaaaaagtga taaaatgctt tgaatcagat acttctattg atgctgttta tgctgatttta    360
tattatgttg ctcagaacga tatatctaaa atagttcggt attggaaatc aggggggacaa    420
```

```
cgtcctttct gtaaagggtg gcatccggct catcctacat tttatgtgaa gaaggaagta      480
tatcagagat atgggttgtt cgatctggat tttaagttcg cagcagattt tgagttaatg      540
cttcgtttga ttgataaaga gcatattaaa ttatattatc ttcctgaacc tttagtcagg      600
atgcgattag ggggaactac aagtaagaat ctatctaata ttaggaaagg aaatcttgaa      660
tgtataaatg cttttaaaaa gaacggaata aaagtgagta tgttatatcc tttatatcgt      720
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```

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<210> 544
<211> 636
<212> DNA
<213> B.fragilis
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<400> 544
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tacgaaatgc ctaaacttcc gtacgcaaac aatgcgctgg aacctgtaat cagtcagcaa      120
accatcgatt accattatgg taaacatctt caaacatatg taaacaatct caatagcctg      180
gttccgggca ccgaatatga aggaaaaaca gtagaagcca tcgtagcctc ggctcccgac      240
ggagctatct tcaataatgc cggacaggtg ctgaaccata ctctgtactt cctgcaattt      300
gcgccgaaac cggcaaagaa cgaaccggca ggcaagttgg gagaagccat caaacgcgac      360
ttcggcagct ttgaaaactt caagaaagag ttcaacgcag cttctgtagg attgttcggt      420
tcgggatggg catggctgtc cgttgacaaa gacggaaagc tgcacatcac caaagagccc      480
aacggaagca tccggtacg cgcgggactg aaaccgttac tgggatttga cgtatgggaa      540
catgcttact acctcgacta tcagaaccgt cgtgccgacc acgtaaacaa actgtgggag      600
atcatcgact gggatgtcgt agaaaaacgg ctgtaa                                636
```

```
<210> 545
<211> 381
<212> DNA
<213> B.fragilis
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<400> 545
agatttgaat cgggcgatgg actggacacc tgtcaggaaa agaaatctgt gaccctcttt       60
ttctttcttc aactcgcgca acagatcccg attgtcatat tcaaatttaa aaggcaaatc      120
atcagggtcg cagttgtctt cgaaaatcgg gttgaggtaa gagcggtcgt aaatgcgttc      180
gtatcgaatg cagggaatgc cgagatcatg cgcaacatcg gttactgtat catgcagctt      240
ttcggcaaag gggtgggcgg catctatcaa aaggcgaatg tcgttttggc gacagaaagc      300
tttcagggtt ctccgggtca tggcgccgct caggcgtatg ccatgatgca ggtagatatc      360
ctgttcgtca cctttggttg a                                                381
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<210> 546
<211> 852
<212> DNA
<213> B.fragilis
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<400> 546
tcggtacgat ccgtgacttt gtctcttccc gtaagtaatt tccggttatt aaccttcaat       60
aatctgtcaa gcataatgaa agccgtcatt ttagccggtg gcttcggcac ccgcctgagc      120
gaagccacta acctgatccc caaacctatg gtggagatcg gtggtaaacc catcctctgg      180
catatcatga aaacctacag ccattacggc atcaacgatt tcgtgatctg ctgcggttat      240
aaacaatata tcatcaagga gtatttcgcc aactatttcc gtcataacag cgatatgacc      300
gtggaccttt ccaacaatac gaccaccatt ctggacaacc attccgagaa ctggaaagtc      360
acgatggttg ataccgggct gaacacccaa acgggcgggc gtatccggcg tgtacagaaa      420
tatctcggga cgaacgtttt cctgctgacc tatggtgacg gtgtcaccga cctgaacatc      480
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cccggtggta agttcggcgc cctgcagctc gatctcgata cggacaaggt cctctctttc      600
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gaagtgttcg attatatccc tgagggtgac tccaccatct ttgagcggca acccctcgag      720
tctatagcca aggcgggccg gatgcatgct ttccgtcata cgggtttctg gaaaccgatg      780
gatactctga gagacaatac agaattgaat gaaatgtggg atcagggagt cgctccctgg      840
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aaagtgtggt aa   852

<210> 547
<211> 1125
<212> DNA
<213> B.fragilis

<400> 547
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agctggctct ccatctggtt gcatgaattg ggggccgagg tgattggtgt ggctcaagac   180
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cttttgatgt tggatatctc caaggctcgg ttctgtctgg ctgggagcc taggatgaat   1020
atcgggcaga cggtcggatt gacggtggac tggtataaga gataccggga agaagaggta   1080
tatgatgttt gtgttgacca gataaaagat tatttattga aatga   1125

<210> 548
<211> 186
<212> DNA
<213> B.fragilis

<400> 548
ttaatgatgt cagttatttg gctctttaat agtcctgagg aatcagattg ttcattagga   60
gtaataatag ggatattatt atcccaagca ttgtcttcat tgccacagga cataaaaact   120
aaaaaaaata gactgagaaa gagtggtaca aaatacttca taatgtttag gttaggttat   180
aaatga   186

<210> 549
<211> 1434
<212> DNA
<213> B.fragilis

<400> 549
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tttgcaactc aaaaattgat gcctatgctt ttaattatag atgatgatag cggggtccgc   120
tcttccctga gttttatgct gaaacgcgcc ggttatcagg taattgcagt gaccggcccg   180
cgtgaggcga tggaagtagt tcgttcggaa gctccttctc tgatcctgat ggatatgaat   240
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cgtcccgatg tcccggtcat tctgatgact gcctggggca gtatacagtt ggctgtacaa   360
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aacaaaggaa ctattttttt ggatgaaatc ggggatctcg atccgtcgtg ccaggtaaag   840

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```

```
<210> 550
<211> 324
<212> DNA
<213> B.fragilis
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<400> 550
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caactcaaag ataacaaaac gaaacaggtt acgctggttc cgttcatgtt tgtggcaggt   120
gatcacgcca ataacgatat agccgtcgac tggaaagaag cccttgaaaa agaaggtttg   180
aaagtagatg tacgtatgca ggggttgggc gaaataccog ccatccaaca actgtttatc   240
gatcatgccc aatttatgct aaagcatgaa atggtggata taatgaagaa aaaagccaaa   300
tatgcaaaag acaaagacga atga                                          324
```

```
<210> 551
<211> 1503
<212> DNA
<213> B.fragilis
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```
<400> 551
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gtcatgatgt accacggatt tccacgtgca tcacaagctg aaaaattaga aaagctggag   180
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atgtatcgcg accgcagttt attaccggta tggaaaatca cagtagacga tcccgaccac   1260
agttgttatt acattcatcc ggaaacagcc acagtccgat acgtcaatag cactgcccgt   1320
tggaaatact ggatgtatac cgctttgcac agactacgca tacaaggact gaactcctct   1380
cctacacttc gtaaaagtgt actgtgggta ttgctgcttg gcggcacggt ttgttcatta   1440
agcggagttg tactcggagt gagatatatc gaacgaaaat gcagaaagaa aacaagaaga   1500
taa                                                                 1503
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<210> 552
<211> 519
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<212> DNA
<213> B.fragilis

<400> 552
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gattatatgt ttgtcaccct ttatacctat tttgaacctc gcgggttcga tattgagaat   180
acctaccggg tggagttcga ttacctgata gagaaaagtc ccgactacat agccaaccgt   240
acggatgagg aagcacatgc agatatgcgt gagttattgg atcgccttcg tcgtcgtccc   300
ggagtcgagg cggtgagtat gtcgcaaaat tctttcccgt acaacggaag taacagtggg   360
atggacgtac gcctggatac catggagagc aagtacaaca tccgtcgttg ggtgacgccc   420
gacttcttcc gtgttttccg ttatcaggga gccaaccgga gaaactccgg aacaattagc   480
tgctctgttg aaggagggta cttttatggt atcgcgtaa                          519
```

<210> 553
<211> 1044
<212> DNA
<213> B.fragilis

<400> 553
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atgaaagtat atattaaaaa tatttctaga aaaaaagggg agttccagtt ctatatgcat   120
cagtttgtag aagcttgcat cagacaaaac ataccatttg tgaatgaatt gcatgtgtgt   180
gtgcggttga aactgagtgc tgtgatgatc aaactgggac attggataaa ttttttcttt   240
tgtcggtgta ataataaagc gattattgtc tctacttggg gtggtggatt aatgtatacg   300
tcatttccgt atagtctatt gtatgaaata attccagtat tttgggatag ttggcctttt   360
aattgggaag agcagattta ttcgttaaga agattaaatt gtagaacatg ttttgtgact   420
tctagccaag ttgcacaaag gataaaagaa acactaccaa acataaatgt ccattggctt   480
cctgaaggta tagatatatt ggattatgtg cctggtcagg atttgacaga acgaagcatt   540
gagatttatg agcttggaag acaaaaggct gattatcaca agattttgtg tgatttgaaa   600
tcagaaggta tcttttcgag ttttctttgt aatgaatacg atataaatgg aatgactact   660
aaactagcat ttcctactgc aaaagctttg ttgaaggctt tacccaatat aaagatagtg   720
atttctttc ctcaagtgga tacacatccg gaaaaagttg gtaatataga aactctaact   780
caacgatatt gggaggcaat gcttagccga aatctgatag tgggtcgggc tccaaatgaa   840
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caactttcag atatattact taatataagc tcttttcaaa aattagtcga tagaaactat   960
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cggacttctg gctatgaaat atag                                        1044
```

<210> 554
<211> 1161
<212> DNA
<213> B.fragilis

<400> 554
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gcattgtcga aagaacactg cgatgtaaat gattttatgg cattgatttc gccggctgcc   180
gctccatatc tggagacgat ggcacgtctc agccggaagt atacgatgga acgcttcgga   240
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tactgcggct ttaaccacaa caacccgatg aagcgtacca tccttacgga agaagagatg   360
gtgaacgagt acaaggcgat caaaaagctg gccccctttg agaatctgtt gctggtgaca   420
ggcgagaatc ctgccaaagc cggagtggac tacatcgaac gtgccctctt gctggcaaag   480
ccctactttg ctaaccttca gattgaagta atgccactta aagcagaaga atatgaacga   540
cttacacatg caggtctgaa cggggtcatc tgctttcagg agacgtataa caaagccaat   600
tacaacatct accacccccg cggcatgaag tctaaattcg aatggagggt caacggattc   660
gaccgcatgg gacaggccgg agtacacaag ataggaatgg gcgtactgat cggactggag   720
gaatggagaa cggatatcac catgatggcc tatcatctcc gctacttgca gaagcattat   780
tggaaaacga aatatagtgt caacttcccc cgcatgcgcc cgtcggaaaa cggaggcttc   840
```

```
cagcccaatg tggtgatgaa cgaccgtgag ttggcacaag tgactttttgc gatgcgcatc      900
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atggctacgc tcggagtgac caccatgagt gcagaaagca aaacggaacc gggaggatac     1020
tttacctatc cgcaagcact ggaacagttt cacgtaagcg acgagcggaa agccgtggag     1080
gtggatgcag cactacggtc gctgggacgg ataccggtat acaaagactg ggacacggcg     1140
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```

<210> 555
<211> 1668
<212> DNA
<213> B.fragilis

<400> 555
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atggctgacg agagcatcaa gaagatagcc cacaccatgc tgaatgccgg acgtggaaat      180
ccgaactgga ttgctaccac tccgcgcgaa gcgttcttcc ttttaggtaa attcggactg      240
gaagagtgta ggcgtgtgat gtacctgccg gaaggaatag ccggtattcc gcaaaaagac      300
ggaattgccg cccgctttga gactttcctc aagaccaacc acagccagcc gggggcagag      360
ctgttgaaag ggacgtatca atacatgttg ctggaacatg ccgccgaccc ggataccctt      420
gtccacgaat gggcggaagg agtggtaggc gatcagtatc cggtgccgga ccgcattctg      480
caatttaccg aaatgattgt gcaagactat ctggcacagg agatgtgcga ccgtcgtccg      540
ccgaaaggca aatacgattt gtttgccacc gaaggcggaa cagcagccat gtgctacgtt      600
ttcgactctc tgcaagaaaa cttcctgctc aataaagggg atggaatcgc cttgatggta      660
cctgtcttca ctccttatat tgaaattcct caattgagac gctatgaatt taacgttacg      720
gaaatatctg cggatcagat gacgacagac ggattgcaca cctggcaata caaagacgaa      780
gatatagacc gcctgaggaa cccgcagatc aaggcactct tcattaccaa tcccagtaac      840
ccgcccagtt atacactgaa tcccgagact gccgcacgga ttgtagatat cgtgaaaaaa      900
gacaatccga acctgatgat tattacagat gacgtatacg gaacattcag tccgcatttc      960
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gtagctctga accacaccgc cggattatcg ctgccacaac agacgcaaat gagcctgttt     1260
gcttcttttcg ccattctgga taaggaaaat cggtataaaa acaaaatgca ggagattatc     1320
cggcgtcgct tgaaagccct gtgggataac accggattct cactcgtaga cgatccgctg     1380
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gaatttgtca gttatctgaa gaaaacttac agcccgctgg atgttgtttt ccgcctggcc     1500
aacgaaacct cactggtatt gcttaacgga ggaggttttg ccggaccgga atggagcgta     1560
cgtgtatcac tggctaacct gaatgaaaag gattatgtga aaataggtca gggaatcaaa     1620
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```

<210> 556
<211> 1788
<212> DNA
<213> B.fragilis

<400> 556
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tctgagaagg tatatctgtc cggcaagtta ttccccgaaa tccgtgtagg tatgcgaaaa      180
gtagagcaag tgcccagcac aactttcgaa ggagaaaaga aagtgatcac tcccaatccg      240
catgtgtaca tctacgatac cagcggtcct ttcagtgacc ccgacataga aatcgacctg      300
aaaaaaggcc tcccgcgcct gcgtgaagaa tggatactga acagaggaga cgtggaacaa      360
ttgcccgaga tcagttcgga atacggacgc atgcggcggg atgacgggag cctcgaccac      420
ctccgttttg aacatatcgc actgccctac cgggccaagg ccggccggca tatcacccag      480
atggcgtatg ccaaacaggg cattgtcact cccgaaatgg aatatgtggc tatccgtgag      540
aatatgaact gcgaagaact gggcatcgag acccatatca cacccgaatt cgtacgtcag      600
gaaatagccg aaggacgggc ggtgctgcct gccaacatca accatcccga agccgaacct      660
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```
atgattatag gccgcaactt cctggtgaaa atcaatacca acatcggcaa ctccgccact    720
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acattgatgg atctttcgac cggagagaac atacacgaaa cgcgggaatg gatcatccgc    840
aactgtcccg ttccggtggg gaccgtacct atctaccagg ctctggaaaa ggtaaacgga    900
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ggagtggact acttcaccat ccatgcgggc atccgccggc ataatgtgca cctggcggaa   1020
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cacgaccggg aaagcttcct ttacgaacac ttcgatgaca tctgcgacat cctggcacaa   1140
tacgatgtcg cagtgtcgct cggcgacggc ctacggcccg gatcgaccca cgacgccaat   1200
gatgaagcgc aatttgccga gctcgacaca atgggcgaac tggtggtgcg cgcctgggag   1260
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aacatggaac gccagattga aaaatgccac aatgccccgt tctatacgct cggcccgctg   1380
gtgacggaca tcgctccggg atacgaccac atcacttcgg ctatcggagc ggcacaaata   1440
ggatggctgg gaacagccat gctatgctat gtgaccccta aagagcacct cgccctgccc   1500
gataaagaag atgtacgcgt gggagtaatc acttataaaa tagccgccca tgcggccgat   1560
ctggccaaag gacacccggg ggcacaggta cgcgacaacg cactgagcaa agcccggtac   1620
gaattccggt ggaaagacca gttcgacctg tcgctcgatc cggaacgtgc attctcttac   1680
ttccatgccg gacggcatac cgacggagag tattgcacca tgtgcggacc gaatttctgc   1740
gcgatgcgac tgagccgcga tctgaagaaa actcaaaaac aaaaatag                1788
```

<210> 557
<211> 774
<212> DNA
<213> B.fragilis

<400> 557
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acacaaaatc tcccgatagt ggaagctccg aaaggacatc ggtgcatcat tgcacagttg    180
acccaggtac agcgtggaaa aactctctgc atgcaggcgg attctgtggg atgccgaggt    240
ggaaaacggt acacaaactt cacggacaag atgtttcccg gattcgaatg tttcctttca    300
cacaatgaac agggcgaagg agaacgatac aagcagactc cagagctggc agctgccgct    360
ctggcacagt tgcctgcact tcctgtcaag ggagaaaacc tgatcttcaa acgttgggat    420
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tccggtctgt tcacattggc ttgtttttgac aatgtagctc ctgatgcagt gatcgctccc    540
tttggtgcag gctgtgcttc tattatctat catccatacc gggaacaact ggacagaacc    600
aatcgggcgg tattgggatc attcgaccct tctgcacgca aatgtatgaa acccgatctc    660
ttgtcttttg ccattccgtt taacaagttc aagagtatgg tgtcacaaat ggaagaaagc    720
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<210> 558
<211> 468
<212> DNA
<213> B.fragilis

<400> 558
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caagcgagaa ccttgttcgg ttcacttta acaactatct ttgcccaata ttcacacatt     60
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gcttcttgcc aacaggccaa acaaaaagtt ttcgaactgg ctgccgaaca agtaaacaaa    180
caatgcccca tcactgtcga tgaaatgaca agaatggaca gcaccactta ttcaggtaag    240
gacaatacat ttacctattt ctatacctta agcggccagg ctgacgatcc taccatgtca    300
gaacaactga agaaatcatt ggaagaaacc ctgccggaaa caataaagaa cactgaagag    360
atgaaagtgt acagagaatc ggatgtgacc attaaataca tctatctgtc aggcaaaaca    420
aaggaagagc tgattcaagt aacagttact cccgatatgt ataaataa                 468
```

<210> 559
<211> 1227
<212> DNA
<213> B.fragilis

<400> 559
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cttacccgca acaatcgcgc acaaagcgaa gagatgcaac gggcattgcg ccaacaaatg     120
caggaaaacc gggaagagtt gaatcgcagt attcgcgagt tacgcatgga aatgacgcaa     180
accctgaatc agggtttgca acagctgcaa gatgccatgc ataagaacat gatgaccacc     240
ggagaactgc aacgccaaaa gttcgacgca atggcacgcc agcaggaaac gctgatacag     300
tccaccgaga agcgtctgga cgacatgcgc gtgatggttg aagagaaatt acaaaagact     360
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aagggcctgg gcgaaatgaa gtcgctcgca caagacgtag gcggtctcaa gaaggttctg     480
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atgatgagtc cggaacagta tgaagcgaat gtcaagacca agaaaagcgg aaccgaattt     600
gtggagttcg ccatcaaact tccgggaaaa gatgatgcca acagcactgt ttatctgcca     660
atcgacgcca aattccccaa agatgtttac gaacaatact acgatgcttt cgaagccgga     720
gatgccgcat tgatggaatc gtgcggacgc caactggaga caaccatcaa aaaaatggcg     780
aaggatatcc acgacaagta tgtcgatcct ccgtttacaa cggacttcgc tatcttattt     840
ctccccttcg aaagcatcta tgcagaagtg atccgccgga caagcttagt tgaaacgcta     900
caaaaggatt acaagattgt agtaaccgga ccgactactt tgggagctat cctgaacagt     960
ttgcaaatgg gattccggac actcgccata cagaaacgca caggcgaggt atggaccgta    1020
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aatctgcaaa gcgcaggtga ccagttggaa gaagtgatgg gaaaacgtac gcgcgccatc    1140
gaacgcaaac tccgtcaggt cgaagaactc ccccacgagg aaagccggag aatattaccg    1200
atagacgatg gcggagaaga tgactga                                       1227
```

<210> 560
<211> 423
<212> DNA
<213> B.fragilis

<400> 560
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ccattggttg atgataatat ccctgcgaat gataaggatg cagtggaact ctctgttatg     180
tccgacatcg ttattgcata tgggaaagaa cattatccga tagaaaaacc aactgttgca     240
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attggaataa gtctttcacg ggtgaatgat tatattgcag gacgttcaga acctactttg     360
aaaatagccc gtttgctttg tcggatattg aatattcctc ccgttgcaat gttgggtttt     420
taa                                                                  423
```

<210> 561
<211> 756
<212> DNA
<213> B.fragilis

<400> 561
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aaagccggtg gtcctgatcc cgaaaacaac ccgcatctgc gtgcagttgt cgctactgca     180
aaacgtgaga acatgccgaa ggataacgtg aacgcgcta tcaagaatgc catgggtaaa     240
gaccagaagg actataagga aatgaattat gaaggttatg gtcctttcgg tattgcggta     300
tttgtagaaa cggctacaga taacacaacc cgtactgttg ccaatgttcg tagcgttttc     360
aataagtttg gcggaacact gggtacttca ggcagtcttg attttatgtt cagctggaag     420
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gatccgaagt cgtttgccca gattcagaaa tatcttgaag agaatggctt cgaggtgaaa     600
ggtgctgagt ttacccgtat tccgaatgac gaaaaagatc tgacaccgga acaacgtgcc     660
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```

<210> 562
<211> 2373
<212> DNA
<213> B.fragilis

<400> 562

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gccgctttag gccggagcgt cgacgaaggg gccggccgct tccgccgcga gatggaagag    2040
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acgggcgaca atgccaaagc taccattcat ttccgtaatg caggcgataa acagctgttg    2340
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<210> 563
<211> 219
<212> DNA
<213> B.fragilis

<400> 563

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aatgcactga atggaacaga aggactgact gccaagcaga ttaagaaagc aactaaattg     120
gtggataaag atttgttcct tggcctcgga tggctgttga gagaagataa gatctctact     180
caggaaatcg aaggtgaact cttcgttaca ttgaactaa                            219
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<210> 564

<211> 1329
<212> DNA
<213> B.fragilis

<400> 564
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gtaagttatt attttagacca atacgttttt tatatgatct tttttaaagt aaaaactcgt      60
aatctggttt tttctttttat tcttctaagt ctattaattg tatcagatct attattattt     120
accagatatt caaattgggg aataaaaaca gattctattt ggcttttttat tgcaatcata     180
gatgtagtat tacttttttat gcttatttct tttttttcgat ttaaaagaat agtaaaccca    240
tcttctgtat atcttgtttt tgtaggacta tttgcatata gtgtattacc actatcagag     300
aatattcgct tctcgaatga gttgctcttg ataatattat gtggtgtagc agcttatttt     360
gtaggtgtat tttgtttgcc tcaaatacac attattactt tcccggtttt tacaaacagg     420
acaaaaagaa tcttttatta tattctatgt gtactaactt tttcttgttt tatttatgag     480
atcaaaaatg ttggttacat acctgtcttt gtgataggac aaagtttaga tatttatgga     540
gaagttggtg aatctaattc cgtttacat acatttgttt tattgactcc tatattattc     600
tattggtcgc ttatcttagc gaaagaggga attatacaga cacgaattag aaattgtatt     660
gtttcttttt tgttgtttgt atttgttaat aattttggtc gtacttctct tttgatgttt     720
ataataacag gattgatata tttagaattt tatacaaaat taagtgtctc aaagtttatt     780
agtataattt ttttgtttat cagtttatttt attattatgg gtaatgtgag gtctggaagt     840
acttttgatg gaataaataa agtgctgaga agaataggaa atacccaata tgaaacatct     900
atttttagaat cttatctaat atcatattct tctgttaatt tctataagat gaatgatgta     960
atacaactaa aagaagtatt gaattactct tctaatggta gaaattcatt aaagccaata    1020
gttaaactat tgagtataag tgaaccattg gataatgtcg cagagtttca aacacaacaa    1080
aatttatcta cttatatcgc agatccatat cttgatttttg gatatgcagg ggttgttgtt    1140
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tgtccggaat acataatctc atggggggta gttgtctttt gtatattgat ggggtgtttt    1260
tttaatgcgt tcaatacgat gttggtatgg gtaatatata tatgtaataa aatattgcta    1320
aaacgatga                                                            1329
```

<210> 565
<211> 1356
<212> DNA
<213> B.fragilis

<400> 565
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acaatacatt atatgagtaa gaaagaaaca ctcaagcaac aaattctcga tttaacccgg      60
gaatactaca aagaggttca cgggtcctcc cgctccttcg aacccggtaa gagttttgtc     120
aactacggcg gccgttattt tgatgaccgc gaactggtga acctggttga ctcatccc'tt    180
gatttctggc tgaccgccgg tccgtgggcc cggaagtttg aaatccgttt tgccgaatgg     240
ttgggtgtta aatattgctc cctgaccaat tcgggctctt cggccaacct tcttgccttt     300
atggccctga cctcgccgca gttgggtgag cgcagaatca ggcggggtga tgaagtgatc     360
acggtagcct gcggctttcc cacaaccgtg accccctgca tccagtatgg tgcggtccct     420
gtttttgtgg atgtcaccat ccccgagtac aatatcgacg tgactcaact ggaagccgca     480
ttatctccca aaactaaagc ggtaatgatt gcccactctt tgggtaaccc gtttgatttg     540
caggctgtca aagatttctg tgataaacat aacctctggt tggtagagga taattgtgat     600
gcccttggct ctacttatac aattgacggt gtagaaaaga aaacaggtac gatcggccat     660
atcggcacaa gtagcttta tcctccacac cacatgacga tgggagaggg cggtgctgtc     720
tataccgatg atcctctgct gcacaaactg gtcaattctt tccgtgactg gggccgtgac     780
tgctggtgca tcggggggtgt tgacaacacg tgcaaatacc gtttcagcaa acagttcggt     840
gacctcccgg taggttacga ccataaatat gtctattccc atttcgggta taacctgaaa     900
gtgaccgata tgcaggccgc catcggctgt gcccagcttg agaagctgga ctccattgtc     960
gaagcccggc ggtcgaactt cgcctacctg aaagaaggcc ttgcgggtac atctggcctt    1020
atccttcccg aagcgcagaa gaactccgac ccgagctggt tcggcttcct tatttcggtg    1080
aaggaagatg cgggcttcac ccgtaacgac ctttcccaac acctggagag caggaagatc    1140
cagacacgca acctgtttgc gggcaaccta ctgaagcatc ccgcctttga tgaaatgcgt    1200
tccacgggtg agggataccg cgtaatcggc aatctggaag gtactgatta cgttatgaat    1260
cataccctct ggatcggtgt ctatccgggc atgacccgtg ccatgctcga ccacatgatc    1320
ggtacgatcc gtgactttgt ctcttcccgt aagtaa                             1356
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<210> 566
<211> 903
<212> DNA
<213> B.fragilis

<400> 566

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agagaacatt attttgatgta tgtaaagaaa agaaacaacc atttttaaaat ttataatttg      60
atggagcaac gcacttattt acctttggtg tctgttatta cggtgtgtta taatgctact     120
actgtgattg aggctactat tcttagtatc attgggcaaa catattccaa tatcgaatat     180
atcattatag atggtggtag tacagatgga acaatagaag tcatcaagaa atatgaaaag     240
aaaatatcct attgggttag cgaaccggat aaaggtattt atgacgctat gaataaaggt     300
attgtaaaat cgactggaga atggatccat tttctaaatg caggagatgt ttatttgaac     360
acccacatat tggaagattg cataagatgc tttaatgaga agaaagtgaa agctgatgtt     420
ttatatggtg atgtcatatg caaatttgat tttggaaatt tactttttaaa acctggtgct     480
ttgagtgatt ttgaatcata ttttcctata tctcatccag ctactcttgt gaaaggagaa     540
ttgcttaagg aaaatatatt tgatacttct tatcagatat ccgctgatta tgaactgtta     600
tatagattat atcataaggg gtgtactttt gagtacatac ctataccatt ggttttgttt     660
gatgcaataa ctggaatatc ttctactaat cctctattgc tttataatga aaatactcgg     720
atacaggaca accgacataa aataagaaaa tgtattagaa ttgctataat aaaagtacgt     780
gtgctttttgt catttataat aaatggattc ttactaaatg attatgtgcg aaataattat     840
cataaaaaga gattgttgag aaataagcgt tttaacgaaa tagatattaa taattttatt     900
tga                                                                   903
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<210> 567
<211> 957
<212> DNA
<213> B.fragilis

<400> 567

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cttatgtact atctgataat cttagttctg ctattcctgg cagaactttt ttatttccgc      60
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acgctacggg gtggaggtat tattttctac ttgggtgcat tggcttattt tctgacaaat     180
cagtttgagt atccttggtt catgctggct ctgactttga taacctttat tagttttgtg     240
gacgacattc gctctacctc tcagggattg cgtttagttt ttcattttac tgcaatggcc     300
ttgatgtttt atcaatgggg attattcaat ctgccttggt ggactatcct tgttgccttg     360
attgtatgta caggcattat caatgcttat aactttatgg atgggattaa tggcattacg     420
ggagggtatt cttgggttgt attacttgct ttagctttta tcaatgtgca aattgtccgt     480
tttgtggagg aggatctgat atacactatg ctttgtgctg tgttggtatt taatttttttc     540
aattttcgca agaaggccaa atgctttgcc gggatgtgg gatcggtcag tattgccttt     600
gtgattcttt tcctgatagg taaactaata attcgaacag agaatttcag ttggattgtt     660
ttgcttgtgg tttatggagt agatagtgtg ctgactatta tccatcggct tatgctacat     720
gaaaatattg gtttgccaca tcggaaacac ttatatcagt tgatggcaaa tgaactggag     780
atcccgcatg tgatggtttc actgatttac atgacatcac aagccataat tattgttggt     840
tatctgttaa ctcccggttg gggctattgt tatttattgg cacaattgt catactaagt     900
atggtgtata tcttattttat gaagaaatat ttccatttgc atccggctat gaaatga      957
```

<210> 568
<211> 1488
<212> DNA
<213> B.fragilis

<400> 568

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acacagtctg tagatgcagc agtagctctg aatgagctga agacagctta ttgggagtac     180
cgcacgtttc gcgccgatct tcttccggaa gtaaacttca gcggtacatt gcccagttac     240
agcaagcagt ataacagtta tcagaatgaa gacggctctt actcgtttgt ccgcagtaat     300
aagttaggat tgaacggtgc tttgtctatc gaccagaaca tctggtttac gggaggtaaa     360
gtttcattgt cctcttcact cgactttatg aaacagttag gttccggagg aagccggcag     420
```

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ttcatgtctg tccctatcgc ccttcaactg actcagccca ttttcggagt aaacaacctg      480
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gcgacggaga cggtgaccat gaatgcgatc acttacttct tcaatttgct gtcggcaaag      600
gagacactgg gcactgcccg acagaatcag gtgaatgccg accgtttgta cgaggtggcc      660
ggggctaaac gaaaaatggg tcaaatctca gaaaatgaac ttctgcaact gaagcttgcc      720
gccctgaaag cccgggctgc cgtgacggat gcagaaagca atctcaatgc ccatatgttc      780
cgtttgcgct ctttcctggc cataggaaac gacctgatac tggaacctgt ggtaccggaa      840
tcggctccca acctaaagat ggaatacaac caagtgctga acaaagcact ggaacgcaat      900
tcgtttgccc acaatattcg tcgtcgtcag ttagaggccg aatatgaagt tgcaacagcc      960
cggggaaatc tcaggagcgt cgatcttttt gccaatgtag gttatacggg actgaataaa     1020
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ctggtcgagc atttcaacaa tcaggcacag cagctttcca tagccaatga ggccgataag     1260
attgcgcaac agcgctataa gacgagtgtc gaaacattcc tgatcggtaa gatcaataca     1320
ctcgatctga cgacgccca gaactcgaaa gacgatgcgc gccaaaaaca tatcaacgaa     1380
ctgtactggt attggtatta ctattatcaa ctccgtagcc tgacgttgtg ggatttccaa     1440
aacaatactc ccctggaagc tgattttgaa gatattgtaa aaaaataa                  1488
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<210> 569
<211> 2406
<212> DNA
<213> B.fragilis

<400> 569
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atcatatag ctgcattggg gagtgctcta ttacttccct cacaggcaca acagaaaaat      120
aaagaatata ctaacttcaa cgattctgta ttttcaatca acgaagtagt agtggcaacc      180
aactacagac gcaagaccga tgctttgaaa ctggatgttc cggcaaagtt cattcctatt      240
tcaaccaact ccattacttc tggaatgctt gagaaacgaa acatccggga tatacaggaa      300
gcctcccgtt tccttcccgg tgtgcgcttt cgcacctctt acggagcgtt tacccaattc      360
tcaatccgtg gattcgataa ttctgtaatc atggtagacg gagtacgtga cgaacgctcg      420
tctattgaca actcttatcc gttcatggac ttatcggctg tggaaagcat cgaactgtta      480
aaaggtccgg cttcagtact ctacggacaa tccgctgtgg gtggtgtcct caatattgtc      540
cgcaaggctc ctgtaagcaa gcaaagtgtc tatgcccgcc tggcttatgg cagttactat      600
aacaagcagg ccacaatggc tttgggtggt aaactgatag gaccattgaa ctaccgtgcc      660
agcgtcaatt ggcaggatca ggagggatgg agaagcaatg ctaccaaacg tctctccggc      720
tatctggcct taggagggca tttgacagaa aatgacgaat tggatatccg tatcggagct      780
aaccgcgatt tctatccgac agaaatcggt ttacctccca caatgtctta tgacatcctc      840
tcagccacag acggcagcaa atatctgagt aaggggggatg ccctgcccgg actgaacaag      900
aaagcccgct acaacagtga atcggacttt atgtacaacc gtggattcaa tgcttccgcc      960
atgtataagc acacattcag cgaagctttc aaattgatgg agaaattgtc ttatacctat     1020
gacgacattg actacttcgg taccgaatca ctggactacc tcacaagcga ccgtcccatc     1080
tatgatcatt attacatgac caaagacaaa cagggcaatg ataccaaaaa gtatatctgc     1140
ctggactcca tctactacag ttacccgcta cgcttttcac atatcgctaa aactgtgaac     1200
aatcaattgg aggcaagcgg aaagttctat acgggagacg ttgcacacaa ctatttgggc     1260
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tggatggaag ctcccttcag atttgttact gcacagaaaa catttaccca cggattttat     1440
ctgcaagact tggtggaatt cagtgataaa ctgaaaatga tgctggccgg acgttacgat     1500
cttttttatgt ataagactgc taacctgaac accagtgacg gaggacgcca ttatgataaa     1560
ccggatgacg atgcttataa taaaataacc aatggtgcct tcaccttccg tgccggattg     1620
gtatatctgc ctattgaaaa actatctgtt tacggttcat acggtactta cttcaagcct     1680
atccgcgcat tttatgacgc taacaccatt tatatcgaca aggatggaaa agagttcact     1740
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cgatacgaga tcacacgtac attgcagact aacgtaagtt tgttctatat caataaggat     1860
aatatccgcc agactcttgc caacaaaggc gatattgcca acggcgtaga actggacaag     1920
aaagttgtgg gacaagtagg caaaatggat tccaaaggat tcgatattga cattacctgg     1980
agtcccatct acaacttgtc gatgagcgcc ggatacggat ataccgatgc aaaggtacgc     2040
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gatttagccg acaaccctta tatgccgacc acttcaagca aaggcaaaca atatgcctac    2100
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ggactgggag taaacttttc taccagtttt caggacaaag tataccgcaa ctcggataat    2220
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aatgtgcgcc tgggagtcaa catcaataat ctgttcaata aagaatactg taatcaggca    2340
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ttataa                                                               2406


<210> 570
<211> 285
<212> DNA
<213> B.fragilis


<400> 570
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attttaggtt tccgccggct tttctctcct gtaggctctg tctgcaccat acagatatat    120
acaaaaaggc gaggctaccc tcttggagta gcctcgcaca aaccagttaa tctaaagtta    180
ttcttcgatg gctgcctgcg ccgctgccag acgtgcgata ggcacacgga acggagaaca    240
gctaacgtaa ttcaaaccta ctttatggca gaacttaaca gatga                   285


<210> 571
<211> 900
<212> DNA
<213> B.fragilis


<400> 571
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ctgaaagata aatatcaaat taggactgtg gggctgactc ctcgggataa ttatactata    120
aatttagtgt cggatgttcc taaactgaat atcaagtacg atgttgtgct gcatgctgca    180
ggtaaagcgc attctattcc taaaacagaa gaagagaaac aacttttttt tgatgtaaat    240
cttcaggta ccaagaattt atgtactgct ttagagaata gtggtattcc taaagctttc    300
attttatta gtaccgttgc cgtttatggt tgtgattcgg gtgagaatat cacggaagag    360
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gaagggtggt gtgctatgca taatgtaaag ttaagtatac ttcgtccttc attgattgcc    480
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ttaagtattg ccggggaaa agcccggaaa agtgttctga tggttcagga tattgcaaat    600
cttcttccta tgttaataga aaagggtggg atatataatg tttgtgacag ttaccagccg    660
agttttcgtg aactggagat ggtgatatgt aatcaattga ataaaaaag accaatatct    720
attccttatt ggttagctaa aagtatggct gtcattggag attgcctggg taaaaaagct    780
ccgatcaatt cattgaaact tcgtaaaatc acaagctctt tgacctttag taatgaaaag    840
gctgtacgag aactcaagtg gaagcccatg aatgtgctgg agactttct tatagaatga     900


<210> 572
<211> 1437
<212> DNA
<213> B.fragilis


<400> 572
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cggaagagac gtatagcaga cgaccggtat acagacgttt tatttattag aatcgttcat    120
tatataaaaa gaatgaagac ctcagaaaca acccgaccta ctctttcttc tctccctgtc    180
gggaagagag cggaagaggg tacaccccat aaccttttca ccgttatagg tctcgacgac    240
agtccttcgc cttacctttc accttccgtc aaggcattga tagaccaagg atgtgtcttt    300
tcaggaggaa cgcgccatca cgacattgtt gccccactgc tccctgccgg agcaaagtgg    360
atcgacatca ccgttcctct cgaccaggta ttcgcccgtt atgcaggaca tccccatatc    420
attgtctttg cttcgggtga ccctatcttt ttcggctttg ccaacacgat ccaccgacgt    480
ctgcccgatg cggagattcg gctctatccc tcttttaact cttttgcaaac gctggcacac    540
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```

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catacgcctg ctaccattgc aagccggatg ctggactatg gttacaacga ttataccatg    720
tacataggtg aacatctggg acatccggca aaagaactga ttcgccggat gacgcttgaa    780
gaggcagccg cagaaacatt tgaatatccc aattgcctga ttttaactac aggtgacgga    840
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gtttttatcg gcggacatgg cggacggctg aaagaaatca tatcccgggt ccggcataag   1260
cttcttcccg gagcacgcat cgttttcaac tccgtatccg aagaaagtaa aacgcatttc   1320
atcgaagccg ccaacgaatc cggactttgt tttctcggcg gaacaagagt cgcaataaat   1380
gaatataatc caatagagat cctggtggct tcagctccgg actctcctta tctataa      1437
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<210> 573
<211> 1899
<212> DNA
<213> B.fragilis

<400> 573
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atcgcccgcc atcccgctgg ggaaaagatt ctcttccatc cccaccacga atacgttgcg     60
gaactccagt cctttggcgg aatgtaccgt catcagagtc accttctcgc cgtctccctc    120
cttgtcggaa tcctgatcgg tgagcaggga tacttcggag agaaagtcga tcagagaaac    180
gttcgtgttc ccctcttcct gacgcatggc acaaaaatca ttcataccgt tcaccagttc    240
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gatgccggac tgacggatga tttccgtacc tatttcataa gcattcttta cggtcacatc    360
tgccataaac tgctcgatca gcgcacgaaa atcctgcaat ttggtatgtg tacctttatt    420
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ctcgcccacc tgccgggcaa tacgctcctt catttcacgg gcagctttgt tggtgaaagt   1620
cagtgccagg atattccagg gattgtaacc gttctcgagc agataggcta tcttataagt   1680
gagcacacgc gtctttccgg aaccggcacc ggcgatgacc agcgaagggc catcaccgta   1740
gagcaccgcc gcacgctggc tttcattaag ttcttcgata tagtcgggca taaaatttat   1800
ctgttaaatc tctattcacg ggcaaagata gaggaaagtt tggacaactc cgaacatttg   1860
gcccctatat cctgttatat attcagagaa atgaaataa                          1899
```

<210> 574
<211> 312
<212> DNA
<213> B.fragilis

<400> 574

```
ttcggcttcc ttttttttgtt tactgtttac cgttgcttca agataacagt tagggataat    60
agcagtattc cagccactgc gcagtcagat ggaggaatgt tgttgaacta tgacgatacg   120
gaaaaccgca cttatttgag gttcaccggg tatccacctc tcataacaca gttgaataat   180
ataggtaagg agggatatat caatgtgata gacaccaaga gtgtattgaa ggtcagtccc   240
tcaaataatc aaattgaggt tgctccattt gaagattatg atgcgcacac cacccgttgt   300
gtacaggaat ag                                                       312
```

<210> 575
<211> 207
<212> DNA
<213> B.fragilis

<400> 575
```
acacaattcc tattatctat ttatttcaaa tatcaaatca gcaaatatta taagatttac    60
catcattggg ctaccggaaa attttttggga tattataaat gctcctatta ccagagccgg   120
tattatagat gccgggtgga ttcccgaagt tacaattctt ggagatttat gtcgacaaat   180
gagtcatatc tgttcagatc catatga                                       207
```

<210> 576
<211> 723
<212> DNA
<213> B.fragilis

<400> 576
```
aatattgcta aaacgatgat aacagtttgt atggctacct ataatggaga gaaatatatt    60
gaagaacaat tagaatcagt actaatgcaa ttgcattcca atgatgaagt tattatttct   120
gatgatggtt ctggcgatag tacagtagac ttgattcgaa ccttcaatga ccctcgaata   180
aggctttttag tcggtaataa tttcttttct cctactcaaa actttgaaaa tgccttaaaa   240
tatgcaaaag gcgattatat attttttatgt gatcaagatg atgtttggct ccccgataaa   300
gtagaaagta tgctgcaata tttgcttcaa tatgatttgg ttgtgtcgga ttgtaaggtg   360
gtggatgcgg aattgaatgt aatttctcag tctttttta tggggcgttc gtcaggaaaa   420
ggttttttgga agaatttaat taagaacact tatttggggt gctgcatagc atttagaaaa   480
gaagtattag gttacatatt accttttcct agaaatatag cgatgcatga tatatggata   540
ggattatctg ttgaaatgca tagtaactct ttttttctgc ctcgtcaact aatactatat   600
cgaagacatg gctcaaatgt tagttttgga ggggaaggaa gtaaatactc gttaatgtat   660
aagataaagt atcggttgtg tatgcttttt tatttattaa aacgaaaata tttgaataaa   720
tga                                                                  723
```

<210> 577
<211> 207
<212> DNA
<213> B.fragilis

<400> 577
```
gctcgtcata atactccgga agttcgcgga ccaacatcac accttccttc cagaatatcg    60
catgatttct ataaaaaggt tcgggatacc gcaaaaacaa taaatcattc agaacaaaca   120
actaacacta ttagttattc gactaacagc ataaattatt tacctaatct tagcaggaga   180
ttagaaaacg gaccttatta caggtga                                       207
```

<210> 578
<211> 1230
<212> DNA
<213> B.fragilis

<400> 578
```
tccatacata aaattaatat catggagaag aatattttca aactggacaa tgaacaactg    60
aaaggaatcg cacacgcatt ccgggagaaa gtggaagagg gattaaataa gaataatgct   120
gaaatacaat gtattcctac ctttatttta cctaaggcga ccgatgttaa aggcaaggct   180
ttggttctgg acctgggagg taccaactat agagtggcaa ttgtcgattt ctcaaccgaa   240
```

```
aagccaatca tctatcccaa taatggttgg aagaaggata tgtcgattat gaagtcgccc      300
ggttataccc gtgaagagtt gttcaaagag ttggccgact tgattgttga aataaagcgg      360
gaagaggaaa tgcctatcgg ttattgtttt tcttatccga ccgaatcgat accgggaggc      420
gatgcaagat tgcttcgttg gaccaagggg gtagacattc gggaaatggt gggacagttt      480
gttgggaaac ccttactcga ctacctgaat gaaaaaaata aaatcagatt tacaggagtt      540
aaagtgctga atgacacgat tgccagttta tttgccgggc ttaccgacaa aagctatgat      600
gcttatattg gcctgattgt agggacaggt acaaatatgg caacttttat tccgtctgac      660
aagataacga agttggaccc ggaatgtcac gtacaaggct tgattccggt caatctggaa      720
tcgggaaact tttatcctcc cttcctgact gcggtggacg atactgttga cgcaacttct      780
gacagtttgg gtaaacagcg ttttgagaaa gcggtatccg gcatgtatct gggagatatc      840
ctgaaagcag ctttcccttt ggaagaattt gaagagaaat ttgatgcaag gaaactgact      900
gctattatga attatcctga tatacacaaa gatatctatg ttcaggtagc ccattggatc      960
tataacagat cggcccagct cgtcgctgcc tctcttgccg gattaatcgc attgctgaaa     1020
tcgtataatc gagatatcca tcgggtttgt ctgattgccg agggcagtct tttctggagt     1080
gaaagtcgga aagataaaaa ctataatatc cttgtaatgg agaaattgca ggaacttctt     1140
cgtgagcttg aactggaaga tgtcgaagtt catattaata gtatggataa tgccaatctg     1200
ataggaacgg ggattgcggc attatcctga                                      1230
```

```
<210> 579
<211> 249
<212> DNA
<213> B.fragilis
```

```
<400> 579
ataagacata aagctacaat gataaatccc atacaactca aaagcaccaa tacagctagt       60
atcttagaaa atgatttatc caattcttta aaatctcgta atgacaccaa tttagacaaa      120
ttgggtactt tagtgtatat ccagttcatt gaaacagatg agaccccgtt tatcacactt      180
aatgtcattc caagttgccc agcagcagca ctacctattg tggcaaacag aatcggattg      240
aaaaactga                                                              249
```

```
<210> 580
<211> 1320
<212> DNA
<213> B.fragilis
```

```
<400> 580
gaaaatagta acaagcacaa aatgattaaa caatatttca agcaggccct tgcacaactc       60
agacagcagc ccttgctgac tacgatcagt gtgttgggca ctgctttgac catttgcctg      120
attatggtag tggtcatgca acagcaaata aaaaccgccc cttttgctcc ggagagtaac      180
cgtaaccggc tattgcatgt caaacagatg agcacgagca acaaaaactg gagtgatgac      240
ggatcgagta acggtccgat ggggctgcag acagcaaaag gatgttttga aggattaacg      300
acggccgagg aagtcagtat ctatacgata cccgaaacta tgcaggtggc tttgccccgt      360
ggtgtacgta cggggatcga tgccctcgag accgacggag ctttctggag gatattcgac      420
ttttcgttta tagacggtaa gccttattcg gatgcggaag taaaatccgg gcttccggta      480
gctgttataa cagagagtgt cgcacgtctt ctttttcggta cgtcccatca ggtgtccggc      540
aaggagatct tggtgaatga tgcggtctac cggataagcg gagtggtgaa agatgtgtct      600
tcaatggctt cgacagccta tgcacagatt tgggttccat attcatcaac ccatattacg      660
ggaggagaca atacctggtg tgacgggatt atgggagtga tgcgagtggt gatcctggcc      720
cgcagttctt ccgacttcga agctatccgt gcagagtgcg aacgtcgccg cttggcttat      780
aacgccgggt tgggtgatta ttttgttttc taccgtgggc agccggatga ccaactgacg      840
atgtctcagc ataaatgggc aaatgtgcag ccggatatgg cagcctattt tcgtcaacaa      900
gtcattatat ttttgattct gttactggta cctgccatca atctgagctc gatgacccat      960
agccgtttga gacaacgcgt tgccgagatc ggtgtacggc gtgcgttcgg agctacccgt     1020
gggggagtga tggggcaaat tgttgctgag aatctggtac tgactttgat ggccggagtg     1080
gtcggactgt tgttctgtct gatcatatct tattgttggg gaggtacgct ttttgccgat     1140
agcagattga tgtaccttaa cacggctccg gttatcgagt ggaaaatgct ttttaaattt     1200
tctactttta tttatgcatt acttttctgt ttggcactga atctgctgag tagtggatgg     1260
ccggcctgga gggcatcgcg gatgtctatt ataaatgctc ttagcggaaa gcttaactaa     1320
```

<210> 581
<211> 288
<212> DNA
<213> B.fragilis

<400> 581

```
ttgttcttca atatatttct ctccattata ggtagccata caaactgtta tcatcgtttt      60
agcaatattt tattacatat atatattacc cataccaaca tcgtattgaa cgcattaaaa     120
aaacacccca tcaatataca aaagacaact acccccccatg agattatgta ttccggacaa     180
ttcttttct catacctttc gaataacata acagcaatca ttccatatag acaattaaga     240
acaacaaccc ctgcatatcc aaaatcaaga tatggatctg cgatataa                 288
```

<210> 582
<211> 579
<212> DNA
<213> B.fragilis

<400> 582

```
agaaaactca aaaacaaaaa taggatgact gcaacggaaa ggacagcgga ataccggaaa      60
gcactcgatg tgcctatctc ccaactggag acggaccgga ttgtaaaaga aatcctggat     120
cgaccggaga acttcgacaa catttaccgg ctgacgtcgg acgataaatt attggtgtcc     180
tggcgggcct tatggatatg cgacaaactg tgcaggcaga agccggagtg gctgatccct ·   240
ttcagggaag agctgaccgg aaggttgatg tcctgcgggc acgatggctc gaaacgactg     300
cttctttcca tactctacca tgcacccgca acgaaggtgc cttccgtggc tctgctcaac     360
ttctgcctgg acgccatgct gtcgccccaa gagagtatcg gcgtgcaatc gctcgccatc     420
cgaatggctt accgcctgtg cgagcccgag ccggagttgc tgtatgagct gcgtaccata     480
ctggagagta cagagaccga aatgtattcg accgccgtaa aatcggctgt acggaacaca     540
ttgaagaaga ttaaccagaa gaataaaaag aaaaaataa                          579
```

<210> 583
<211> 801
<212> DNA
<213> B.fragilis

<400> 583

```
aatgaactca aaacaagatc agaaatggaa aagttaatca ttgcgggacg tgaattcaac      60
tcccgcctct tcctgggaac aggtaaattc agctcaaacg aatggatgga acagtcgata     120
ctggcatcgg gcaccgaaat ggtgacagtg gccatgaaac gtgtcgacat ggagagcaca     180
gaagacgaca tgctgaaaca tattgtacat ccgcacattc agttgcttcc caacacatcg     240
ggcgtacgca acgcggagga agcggtgttt gccgcacaaa tggcacgcga ggctttcgga     300
accaactggc tgaaactgga gattcatccc gacccgcgct atctgctgcc cgactcggtg     360
gagaccctga aagcgactga agaactggtg aaactcggat tcgtcgtgct cccctattgc     420
caggcagatc cggtgctctg caaacaactg gaagaagcgg gagccgccac ggtaatgccg     480
ctgggagcac ctatcggaac caataaagga ctgcaaacca aggagtttct gcaaatcatt     540
atcgaacagg ccggtatccc ggtagtggtg gacgccggaa tcggagcacc gagccatgcg     600
gcggaggcta tggaaatggg tgcatcggca tgcctggtaa acacagctat cgccgtagct     660
ggcaacccga tagaaatggc aaaagccttc aagcaggcag tagaagccgg acggacggca     720
tacgaggccg gactgggtat gcaggccata gggttcgtgg cggaagcaag ctcaccactg     780
acggcatttt taaacgaata a                                             801
```

<210> 584
<211> 330
<212> DNA
<213> B.fragilis

<400> 584

```
aaaaacgcca acactaaaac gcaacatcct atcacagaat ccattaaaga aaaaagaggc      60
agaaaaacag gagcgcagat accgggaatt atctccaaca atgaaggagt tataaaagcg     120
ctgatagaat cctacatatt ggacgcaaaa gaacaaaata tcaagacatg caaagattcg     180
```

```
ttggcacgct acatagagga aaaagaactt tttgggaaaa tgagaaatgg agtattcaaa    240
ccattagttt tcagcacaat caggaattac gtcaacgaaa tctggaataa gatggaaaga    300
aagaaaaaga accaagaagg aaagcgctga                                     330
```

<210> 585
<211> 1281
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (1074),(1086)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 585
```
aagaaaaaca agagacatga catccttatg aaaaatattt ttaaagattt aaaaagtaaa     60
gaccacaaac gctatctggg aggtttggac gtcttcagat atattggtcc cggttttattg   120
gttactgtag gttttattga tccgggcaat tgggcttcta attttgcggc aggttcagaa    180
tttggttact cactgttatg ggtggttacg ctgtccacca tcatgctgat catattgcaa    240
cacaatgttg ctcacttggg aatcgtgaca gggctttgcc tttcggaggc ggcaacgcag    300
tatacgccca agtgggtatc gcgtcccata ctggggacgg ccgtacttgc ttccatctct    360
acatcactgg ccgagattct gggaggggcc atagcgctgg aaatgttgct cgacattcct    420
attgtctggg gggccgttct gactaccgtt tttgtttcca tcatgctttt tacaaattca    480
tataagaaaa tagagcgctc catcattgct tttgtatcgg tgatcggctt gtcgttcatc    540
tatgaactct ttttggtgga tattgactgg cctatggcag tagaagggtg ggtgacgccg    600
gctataccta aggggagcat gctcattatt atgagtgtgc tgggtgctgt ggtgatgcct    660
cacaatcttt tcctacattc ggaggtgatt cagagccacg aatacaataa gcaggataca    720
gcgtccataa agaaagtgtt gaagtacgaa ttgtttgata cgctctttttc aatgattata    780
ggatgggcca tcaacagtgc catgattctg ttggcagccg ctaccttctt taaaagtggc    840
attcaggttg aagagctgca gcaggcgaaa tcattgctcg aacccctgtt gggaagtaat    900
gcggctattg ttttttgcttt agccctgctt atggcgggta tctcgtctac gattaccagc    960
gggatggcgg ccggatctat tttcgccggt atctttggcg aatcatacca cattaaggat    1020
agccactctc aggtaggggt tatcctgtcg ttgggcattg cattgctact gatnttctta    1080
tcggcngatc cgtttaaggg tctgatcatc tctcagatgg tgctgagtat ccagttgccg    1140
tttacggttt ttttgcaggt cggtctgacc tcctcgcgta aggtgatggg cgattatgtc    1200
aatagtaaat ggagcacgtt tgtgctttat accattgccg tgatagtgac agtgttgaat    1260
ataatgttgt tgttctcgta a                                              1281
```

<210> 586
<211> 288
<212> DNA
<213> B.fragilis

<400> 586
```
atgaacgaca agccgatcac cgatacaaaa gcaatgatgg agcgctctat tttcttatat     60
gaatttgtaa aaagcatgat ggaaacaaaa acggtagtca gaacggcccc ccagacaata    120
ggaatgtcga gcaacatttc cagcgctatg gcccctccca gaatctcggc cagtgatgta    180
gagatggaag caagtacggc cgtccccagt atgggacgcg atacccactt gggcgtatac    240
tgcgttgccg cctccgaaag gcaaagccct gtcacgattc ccaagtga                 288
```

<210> 587
<211> 1347
<212> DNA
<213> B.fragilis

<400> 587
```
aattgcttaa atctaatatt atatatacct attatgacag ttttacgttc gatgaaggat     60
ttctcgtcga tgaatattac ggcgagtatt ctattgtttg tcacagcgat tgccgctgcg    120
gtaatcgcta actctccggc agcatcggtg tatcaggagt ttttgtcgca tgaacttcat    180
```

```
tttcgcatcg gaggctttaa tttactttcg catgcgggac acaatctgac gatgattgag    240
ttcattaatg acggtctgat gacgattttc ttcttaatgg tcggactgga gattaagcga    300
gagttactgg taggcgagct ttcctcgttc cgtaaagctg cactgccatt cattgccgca    360
tgtggcggaa tggtagtgcc tgttgtcatc tattccatgg tttgtgcccc gggcactgaa    420
ggcgggcaag gactggctat ccctatggca accgatattg ccttttcttt gggagtgctc    480
agcctgttgg gcaagcgtgt tccgttgagt ctgaaaatct tccttacagc gtttgcggta    540
gtcgatgata taggcggtat attggtgatt gccattttct acagttcaca cgtggcttat    600
gaatatttgt tatgggcggc gctgctttac gtcctgttat attttatagg taagaaggga    660
gctaccaata agattttctt tttagttgtc ggtgtggtta tctggtatct tttcctgcaa    720
tcgggtatcc atagtacgat ttccggtgtt attctggcct ttgtcattcc ggccaaacca    780
cagttgaacg tcggtacata tattgagcgt atccggcgca ttatcagtac attccccgaa    840
atgggagcaa acaacatcgt actgaccaat caacagatag ccaagctgaa agaggttgag    900
tcggcttccg accgtgtcat cagtcccctt cagtcgcttg aggataacct gcatggtgca    960
gtgaattatc ttgtccttcc gttgttcgct tttgtcaatg caggtgttat gtttagtggc   1020
gaaggtgaag ttattggcgg ggttaccctt gcggttgctt tgggattatt ggcaggcaaa   1080
tttctgggga tttattcttt tacctggctg gctgtcaaaa gcggtcttac tccgatgcct   1140
ttggggatga actggaagaa tatatccgga gtggcgttac tgggtggaat aggctttacg   1200
gtatcgcttt tcatcgccaa tctttcgttc ggctccgccc atcctgtatt attgaaccag   1260
gccaaactcg gtgtttatc cggtacggta atggcgggta tcttgggata cctggttttg    1320
cattgggtct tgcccaaaag aagataa                                       1347
```

```
<210> 588
<211> 1014
<212> DNA
<213> B.fragilis

<400> 588
cctaacctaa acattatgaa gtattttgta ccactctttc tcagtctatt ttttttagtt     60
tttatgtcct gtggcaatga agacaatgct tgggataata atatccctat tattactcct    120
aatgaacaat ctgattcctc aggactatta aagagccaaa taactgacat cattaattat    180
tccaaaatca attttgatga aaactttaat aatacagaac tttataagaa cttgatttta    240
agccctaaat gggaaaatgt ttctatggtt cttcagaaac aagacacact ccatttatgt    300
gttcctctgc tagcacagga caatcctgaa cacaattcct attatctatt tatttcaaat    360
atcaaatcag caaatattat aagatttacc atcattgggc taccggaaaa ttttttgggat   420
attataaatg ctcctattac cagagccggt attatagatg ccgggtggat tcccgaagtt    480
acaattcttg agatttatg tcgacaaatg agtcatatct gttcagatcc atatgatgaa    540
gcttttcttg agttcctaca cagcaaatgg cttaaagaac atggcaatga aagttcctcg    600
gatagttctt catctggtgg cgattatagt cggctgactg aagcagaaaa gcgcttcctt    660
atgcgacatc cacaagtaat taaaaaattt catgataacg caagaaaagc tagtgaagca    720
gctaaaaaat ttccaggaca gcacaatgga gagggcgatg cggtaagaca tgtttattgg    780
agtgctctca acacgctttc agaaaatgca aatctggcaa aagagttcgg tgatgcacat    840
gaacaaaatc cgggacaaga tattgcagag aagaatatgg atctatttaa taactccatt    900
ggttatcaac tgggagatct agcaaaacaa aataaatggt cagaagaacg tttatttaag    960
gaaataataa aatataaaaa tgatggaaaa ttacaaacaa aattacatcc ataa          1014
```

```
<210> 589
<211> 429
<212> DNA
<213> B.fragilis

<400> 589
attttatcaa accggaatac attcgatccg acttaccttt ggggcgataa tttatctatt     60
aacccttta atcatatacg tatgaaacag aagaaaagac cggcatcaca aactgaagcc    120
atgaaactga gatggaaaaa acggattgtc tttgagaaag gatacactga aatgtgtgcc    180
gaatggatgg cggagcgcct ggaagcgttg accgaccatc tgcaatacgg gcacgcagcc    240
atcgcttatc agaagcagaa cggagacttc aggttggtga aagcgacact gatctactat    300
gaagcggaat tccacaagaa gtatgatccc acaaaaatag aaggcgcagt agtctactgg    360
aatgtggacg aacagcgatg gacgacattc caggtggaga acttcatgga gtgggagaccg    420
atcgtatag                                                            429
```

<210> 590
<211> 2484
<212> DNA
<213> B.fragilis

<400> 590
```
aaacataaaa aacttaatga tatgaatatc tcttataatt ggctgaaaga gtatgtcaat      60
ttcgatctga cgcccgatga agtggcggct gcgctgactt ctatcggact ggaaacaggt     120
ggagtagaag aagttcaaac gattaaaggc gggttggaag gtctcgtgat tggcgaggtg     180
ctgacttgcg tggaacatcc caattcagac catttacaca tcacaaccgt aaatttgggt     240
aacggcgaac ctactcagat tgtgtgcgga gctccaaacg tagctgccgg acagaaagtc     300
gttgttgcca ctttgggcac gaagctctat gatggtgacg aatgttttac tattaagaaa     360
tcaaagattc gcggcgtgga gtcgatcggt atgatatgtg ctgaagatga aatcgggatc     420
ggaacttcac atgacggtat catcgtattg ccggaagatg ccgtaccggg tactcttgcg     480
aaagattatt ataatgtaaa gagcgactat gtacttgaag tagatattac tccgaaccgt     540
gctgacgctt gttcacacta tggggtggca cgcgacttgt atgcttatct ggtacagaat     600
ggcaaacagg ctgcactgac cagaccgtct gtcgatgctt ttgctgtcga aaatcatgat     660
ctggatatca aggtaactgt agaaaacagt gaggcatgtc cacgttatgc aggtgttact     720
gtgaaagggg ttactgttaa agagagtccg gaatggttgc aaaataaact tcgcatcatc     780
ggtttgcgtc ctattaataa tgtagtggat atcacaaatt acattgtgca tgctttcggg     840
caaccgcttc attgctttga cgcaaacaaa ataaaagggg gcgaggtgat tgtgaaaaca     900
atgccggaag gcacaacgtt tgtcacgttg gatggcgttg aacgtaagtt gaatgaacgt     960
gatctgatga tctgtaacaa agaagacgct atgtgtattg ccggtgtttt cggaggtctt    1020
gattccggtt ctacagaggc cacaacggat gtgtttctcg aaagtgcata tttccatccg    1080
acatgggtgc gtaagacggc ccgtcgtcat ggcttgaata cagatgcttc tttccgtttt    1140
gagagaggta ttgatcctaa tatcacgatc tactgcctga aattggcggc tatgatggta    1200
aaggaacttg ccggaggtac catttcttcg gagattaaag atgtctgtgc tgctcctgca    1260
caggatttta ttgtcgagtt gacttacgag aaggtacaca gcctgattgg taaagtgatt    1320
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<210> 591
<211> 192
<212> DNA
<213> B.fragilis

<400> 591
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cacggatttt cacagatgaa tgatttctat tttgaggaat caagtgaaga catctttggg     180
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aatccggggt aa   192

<210> 592
<211> 579
<212> DNA
<213> B.fragilis

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tatacggttt tccttatttg tataggtcca tgggctacgg aacaatcgcc aacagagata   180
aactctctgc tggcctctgc cccacacata ctgacccttt cagtatatgt cacgctcgaa   240
gcctcaataa tgatcgcttt ttgtttcaac tgttttgcag acacctcaaa acagcggaca   300
cttttccaac ggacagttac atacatattg aatttttatc ccggactgct aatggcgggc   360
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atcaccggca tctcttcagt tgctgttttt atactgatat ccggactgag cctactcttg   480
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atcgtactgc ttagtgtcgt tagcacagga aacaactaa   579

<210> 593
<211> 723
<212> DNA
<213> B.fragilis

<400> 593
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aatgcgcttt tctggatatc caacgggcta cttgtcccgg tagtagttct gttgttacta   180
ttctttgcgc gtgctgtact gcttgcaggc ggcttcttcg gagaatttta tcgtagggta   240
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gccgaacaag aattgggacg ttcacgtaca tttgtcaagc tgggtcccat gctcggacta   480
atgggtacat taatcccaat gggtcccgca cttgtaggtc tggccacagg agacattgct   540
tcaatggcct acaatatgca agtagcattt gccaccactg tagtaggtat ggttatagct   600
gctatcggag tggtcaccct gcaaatccgg caacgttggt atgcccgtga aataaacgac   660
cttgaattta tcagtaaaac cctaatccat ggcacgaaac aaacttctac acaaccagaa   720
tga   723

<210> 594
<211> 948
<212> DNA
<213> B.fragilis

<400> 594
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cttgcggcca aaatgcccga tgccagccgt accaagctaa agtctctgtt gagcaaacga   180
atcgtgctgg tcgacaatgt gatcacaaca caattcaact ttcctctgca accaggcatg   240
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tccaaatcga tcacccacta tcgcaccatc aaacgtgcca atggctactc gctggtagaa   720
ttgcgattgg aaaccggacg taagaatcag atacgtgtac acatgcagga tctggggcat   780
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gctttgcatg ctttcaaact ttgtttctat catccggtga cagatcagct aatggagttt    900
gaaacccctt accctcctac attcaagaag ctatttctga agaaataa                 948
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<210> 595
<211> 1806
<212> DNA
<213> B.fragilis

<400> 595
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tctatttcca atcttcagga ggccgttcct gagatattcc ataaaattcga tgctattatc   180
ttcatcggag ctatgggaat ttgtatccgt gccattgctc cccatattga agacaagcat    240
aaagatcccg ccgttgtctg tgtagacagc acaggacgtt atgctgtctc tgtcctgtcc    300
ggacatattg gtggagccaa cggactgacc cggtatgtgg caagcattct gggagccgaa    360
cctgtgatta ccacccggag tgaccgtacc ggtctttggg ccctcgatac tcttggcaaa    420
aaatacggtt ggcaaacagt cccggccgaa tcatcagata tgaatcatct gatcacactc    480
tttgtagatt gcaaaccaac agctctatta ctcgacattc gcgacgaagg cacaacacag    540
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gccggtcccg gcgatccgga gctgatctcc gtacgcggac gtcgctttct cgaagaagcc   1140
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<210> 596
<211> 489
<212> DNA
<213> B.fragilis

<400> 596
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gcccggttgt gtctgtcgct cctgatggga tataatgcga ctctctataa taacggtgac    240
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ttggcccggg aagctcaggc tatcatcgat acgtggcagg acagagagtt gtcggaagac    420
gagcgtgagg tgatggaacg cctgaaggat gtgcaagaga atccgtatcc ttggagtgag    480
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<210> 597
<211> 411
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<212> DNA
<213> B.fragilis

<400> 597
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gatgtgggga tgaatgccca taatggtgaa cccctgttca gtacctttga gttcgggaac   180
gacggttttg gagtggagac ccagttctat gcttcagacg tctttttgta tgatcagttt   240
cgctttcagt ggtattggga agattcttat aatcgtaatt tagtattgaa ttacggtaag   300
aacggtatct cttatatgga cgacgtaagg atatacggag atcggataac cggtgccttt   360
tatctttcgg acgatgcccg gggatttaac tttgaattaa ggatggaata a   411
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<210> 598
<211> 3981
<212> DNA
<213> B.fragilis

<400> 598
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actatcggct accgctattg gatggccccg acacggatcc tgattgtcaa tccgctaccg   180
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caaaccgaaa atttggagtc ctttaagggc tatgatgccg tagttctcta tggacgcagc   300
ctcaacctga cgatcgaca aatgaaggag gcggaacgtg ccgcatcggc cggtattcca   360
cttttcacga tttcactgcg taacttcaat acaattatca acaggaatat cacccctgag   420
caggaagcca tgcttatgca atatttcggg gatgcctgcc gacagaatta ccggaacgga   480
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cagaaagccc ttgaacaata cctgcgtcaa aaaggtattt tccatgaaaa cggacctaaa   660
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<210> 599
<211> 522
<212> DNA
<213> B.fragilis

<400> 599

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cagtctgtag tagctgcatt tgccgatatg tatggattta ctgaagagca ggcgctgcgt      180
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<210> 600
<211> 288
<212> DNA
<213> B.fragilis

<400> 600

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gcacctgaaa cgtgcgcgtc taccaattcc gccacctggg cattgactaa tcagaaacct      180
gccgttaaaa aaaatggaga ggaacagata accgacgttc ttgttgagcg gaaaacgaga      240
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<210> 601
<211> 1812
<212> DNA
<213> B.fragilis

<400> 601

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tggattgtac atcaacttag ggtacacccc gagctggcta tcttcctgac cctttttgtg   180
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cgtattcccg aacccgctct ctggatactg gacaacgtgg ggctgaacat gtttattgcc  1500
gttgtgggca ttgctgcagg tcccagcttc gtgcaagggt tcaaggaagt gggtttaagc  1560
ctgttcatcg taggcgcact ggccacttcc attcctctga tagcaggcat actgatggca  1620
aaatatatct ttaaattcca tccggcactg gtattgggat gcacagccgg cgcacgtacc  1680
actacggctg cattaggagc catccaggaa gccgttgaaa gcgaaactcc tgctttggga  1740
tatactgtga cgtatgctgt cgggaatact cttctgatta tctggggagt agtgatcgta  1800
ttacttatgt ag                                                     1812
```

<210> 602
<211> 1788
<212> DNA
<213> B.fragilis

<400> 602

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tatcagatgg ataaaatcag aaattttgc atcattgctc atattgacca tggtaaatca    60
acattggcgg accgtttgtt ggagttcact aataccattc aggtgacaga agggcagatg   120
cttgatgata tggacttgga aaaggagagg gggattacga ttaaaagtca tgccatacag   180
atggagtaca cttataaggg ggagaagtat attctgaacc tgatcgatac tccggggcat   240
gttgacttt catacgaagt atcccgctcg atagctgcct gcgaaggtgc gttactcatt   300
gtggatgcgt cgcaaggagt ccaggcacag accatctcga atctttatat ggctattgag   360
cacgatcttg aaatcattcc gatcattaac aagtgcgaca tggcaagtgc catgcccgaa   420
gaggtggaag acgagatcgt agagctgctg ggatgtaagc gggatgaaat tatccgtgcg   480
tccggtaaga ccggtatggg tgtggaagag atactggcag cggtcatcga gcgtatacct   540
catcctcaag gtgatgaaag tgcgccgttg caagctttga tattcgactc cgtattcaac   600
tcattccgtg gaatcatcgc ttatttaag ataacgaacg gagtcatccg tgctggtgat   660
aaggttaagt tcttcaatac cgggaaagag tatgttgcag acgaaatcgg agtgttgaag   720
atggaaatgg ttccacgcaa ggaactccgg acgggagatg taggctatat catttcggga   780
attaagactt cgaaagaggt gaaagtggga gatacgatca ctcacgtagc ccgcccttgc   840
gataaagcga ttgcgggatt cgaagaggtg aagccgatgg tgtttgccgg agtttatccc   900
atcgaagccg aagaatttga agatctgcga gcttcacttg agaagttgca gctgaatgat   960
gcctcactga cgttccaacc ggaatcatcg ttggccttag cttcggtttt ccgttgtggc  1020
ttcctgggat tgcttcacat ggaaattgta caggagcgtc tggatcgtga gttcgatatg  1080
aatgtcatca ccacagttcc taacgtatct tatcatattt acgacaaaca aggtaatatg  1140
```

```
acggaggtgc ataacccegg cggtatgccc gatccgacta tgatcgacca tatagaagag   1200
ccttatatca aagcttctat tattacaacg accgattata tcggacctat catgacgctt   1260
tgtctcggta agcggggcga attgttgaag caggaatata tctcgggaaa ccgcgtcgag   1320
ttgttctata atatgccgtt gggtgaaatt gtgatcgact tctacgacag actgaagagt   1380
atttcgaaag gttatgcttc gttcgattat catccggatg gtttccgtcc gtccaaattg   1440
gtgaaactgg atattttgtt aaacggtgaa tcggttgatg cgctttctac cctgactcac   1500
ttcgataatg cttacgatat ggggcgtcgg atgtgtgaga agttgaaaga actcattccg   1560
agacaacagt ttgaaatagc tattcaggcc gctatcggtg ctaagattat agctcgtgaa   1620
acgatcaaag cggtgcgtaa agacgttacg gcaaaatgtt acggaggtga tatcagccgt   1680
aaacgtaagc tgcttgagaa gcagaaaaaa ggaaaaaaac gtatgaagca gatcggtaat   1740
gtggaagtgc cgcagaaggc attccttgcc gtgcttaaac tggattag             1788
```

```
<210> 603
<211> 717
<212> DNA
<213> B.fragilis
```

```
<400> 603
aataaaaggg aatttatgga aagatacagc agacaaacca tgcttccgga aataggagaa    60
gcaggacagc taaagctaaa agctgccaaa gtactgattg taggcgtggg aggactcggt   120
tctcccatcg ccctctatct ggccggcgcg ggagtgggta ccatcgggtt ggcagatgac   180
gacgaagtga gcctcagcaa tctgcagagg cagatactct acacggagga ggaagtgggc   240
gacctgaagg ctatctgtgc ctccatgcgg atcagcgccc tcaacaggga gataaaagtg   300
aatgcctgtc cgggaaggct aagtaaagaa aatgcacgtg atctgatagg ccagtatgac   360
atcatcgtgg acggttgcga taactttgca acccggtatc tgctcagcga tgtctgttcg   420
gagctcggga aaccgtatgt atacggtgct atctgcggat ttgaaggaca ggtgtccgtc   480
ttcaactacg gagaaggaac tcaacggaaa acttatcgtg acctctaccc ggacgaagaa   540
ggaatgttac acatgcctcc tcctcccaag ggggtggtcg gagtgacacc ggcagtaacg   600
ggcagtgtgg aagcatgcga agttctcaaa atcatttgtg gattcggaga ggtcctggca   660
ggcaaactat ggacaattga cttgcggaca ttgcaatcta acatattttc actataa      717
```

```
<210> 604
<211> 447
<212> DNA
<213> B.fragilis
```

```
<400> 604
caaatgacac ttatgaagac attgaatttt atgaaaacgc tattcttatt ggtagctata    60
gtaggcctaa gctcttgtgg tgacaagtat tattcagatg attatctacg aaatagcaat   120
gcaaagctct gtggcaaaac ctgggtaaat gattcggaga agaatgatgt agacgagtgg   180
gttcggcata cattgaagtt tgatgataac ggccggctgg cagagactta tgcctattat   240
catgtaaatg aaagtcagcc ttaccgcacg gagaccaata atctgacctg gtcgtggata   300
gacgatacga tggaaggtat tgtttttgac tatggagtga acggggtgac ttatttcgat   360
aacgtgtggg tacgtgagca taatctgtcc gggaagctga acggaaaggt agttgtattt   420
gtcgattcaa aatataacag aaactaa                                     447
```

```
<210> 605
<211> 1779
<212> DNA
<213> B.fragilis
```

```
<400> 605
atgccggttt ggagtatact atcacttatt ataaaaaaca acatgaaagt atctgactat    60
ataatatcgt atatcgagtc ccggggagta catgtcatat tcggatatat aggtggaatg   120
atcacccatc tggtcgattc tgtttctcag aatccgaata tgcaatttat tcaaacttac   180
cacgaacaga ccgctgctat cgctgcagaa ggctttgcga agaatccgg acttttttgga   240
gttgctattt cgaccagtgg tcctggagct actaatatga tgacgggtat tgctgacgca   300
tattttgact ctattccggt tctttatata acgggtcagg tgaatacata tgaatacaaa   360
tatgataagc ctgtccgtca gcaaggtttt caggagacgg atattgtaag tatggttaag   420
```

```
tccgtcacta aatatgccaa attgatagat aaggctgaag atattaaata tgaactggat       480
aaagccttat atattgcttt gtcgggtaga aaagggcctg tactgctgga tctgccaatg       540
gatatccaac gggaggaaat taatcaggaa acattgatcg gatattccgg tgagagtatt       600
ttaaataatc ctttgatagc ctgggaggaa atcaggttat taatggagtc gtcccatcgt       660
cccatgttgc ttttaggggc aggatgttgc aattcggata tggttttgct gaatgatttc       720
ataagacggc accatttccc ggttattact tctttaatgg gtagaggggc tattgatgaa       780
acatacgata attacattgg gatgataggc agttatggta accgttgtgc taacatggga       840
gttgccaatg ccgatttgtt gattgcatta ggaaccagat tggatactcg acagaccggt       900
gcccggttgg atcaattttt atcaaatggg cacatcattc atgttgatat tgatgacaac       960
gaactggaat atcatcgttt attgaatcgt aaaaaagtga attgtaccat tgattgcttt      1020
ctacagaagg aaaaagaaat gccgatttct ttaggggaca tttcagagtg gaatttttc       1080
ctgcatgggc tcaagcaacg atatggtcag gatgcagaaa tagagcgttt tgttgaaaac      1140
aaatctccat atcgcttcat gcagtatttt gattctttga ctcaaaccga cgatgttata      1200
tgtgcggata taggtcagaa tcaaatgtgg gcggctcaaa ccttacggtt aaaatccggg      1260
caaaaatttg taacaagtgg cggacttgcc ccaatgggct tttcattacc ggtagccatc      1320
gggtgttcgt ttgccaatcc aaataaaaaa gttttttcta taaatggtga tggaggtttt      1380
catatggcta tccagtcttt gatgcttatt tctcaatata atcttcctat taaggtaata      1440
atattgaata atgcttcttt aggtatgatt actcaatttc aacatttgta ttttgatgat      1500
cgaatgtgtg gaactacttt gaatggaggc tacagagtgc cggatattaa atctctctct      1560
acggcttatg gcttacctta ttttagattg actgttgatc ggttggatga tcctgatttg      1620
cgggaagaga tgcaggcagc ccacaactgt attattgaat gtgtggtaga aggcttgact      1680
agtgtttctc cgaaattgga atatgataag cctatttcca agcctttacc tttattgcca      1740
gaagaagaat ataaggagaa tatgctatta gaggcttga                            1779
```

```
<210> 606
<211> 789
<212> DNA
<213> B.fragilis

<400> 606
cgggcagtgt ggaagcatgc gaagttctca aaatcatttg tggattcgga gaggtcctgg        60
caggcaaact atggacaatt gacttgcgga cattgcaatc taacatattt tcactataaa       120
ggttggtttc tgattaagtt aattagtaac tttgctaaac ttaacagttt aacaaaagaa       180
atgaaactta tcgtagtaac gacgcctact ttctttgtag aagaagataa gattatcact       240
gctctttttg aagagggact ggatattctg catctcagaa aaccggaaac accggctatg       300
tattcagagc gcctgttgac actgattccg gagaaatacc acaaacggat tgtcacgcac       360
gaacacttct atctgaaaga agaattcaac ctgatgggaa ttcatctgaa tgcacgaaat       420
cccaaagaac cgcatgacta ttcgggacat atcagttgtt cgtgtcactc ggtggaggaa       480
gtgaagaata aaaagcactt ttatgattat gtattcatga cccggttta tgacagtatc        540
tcgaaagagg gatataactc accctataca gccgaagaac tgcgcctggc agccaaagac        600
aagatcattg acaacaaggt gatggctttg ggaggtatta cgccggataa catactggaa        660
gtgaaagatt tcggattcgg aggtgcagta gttttaggag atttatgggg caaattcgac        720
gcttgctccg accaggatta cctggcagtg atagaacact tcaagaagct gaaaagaatg        780
gcggactga                                                               789
```

```
<210> 607
<211> 330
<212> DNA
<213> B.fragilis

<400> 607
tccatggcac gaaacaaact tctacacaac cagaatgata ctgacccgat gggaacagta        60
gccaacttat tcgatgtagc catggttttt gctgtggcat tgatggtagc actcgtcagc       120
cgattcaata tgaccgaaat tttctccaaa gaagattata cgatggtaaa gaatcccgga       180
caagagaaca tggagattat cacaaaagaa ggtaaagaga ttaaacgata tactccatcc       240
gaacagaaag aatcatccgg taaacgagga aagaaagtag gtgtagccta tgaactcgag       300
aatggaaaga tcatttatgt ccctgaataa                                       330
```

```
<210> 608
```

<211> 924
<212> DNA
<213> B.fragilis

<400> 608

```
tttcgatcta gtaatttaat tttaataagt atattgatga aaggtattgt cttggccggt    60
ggttcgggca ctcgcttata tccgatcacc aaaggagtca gtaagcagtt gcttccgata   120
tttgataagc cgatgatcta ttatcctatc tctgtactca tgttggcggg gattcgtgaa   180
atattgatta tttccactcc atacgattta cccggctttc aacgtttgct gggtgatggc   240
tctgactttg gagtacgttt tgagtacgcc gaacaacctt ctcccgacgg tttggcacag   300
gcatttatca ttggtgagaa gtttataggt ggtgattctg tatgtctggt tcttggcgat   360
aatatctttt atggacaaag ttttacccgt atgctgcgtg aagcagtcca tacagccaaa   420
tcagagaaca aagcaactgt ttttggttat tgggtcagcg atcccgaacg ttatggggta   480
gctgagtttg acaaggctgg gaatgttctc agcatcgaag agaaacctac tgttcctaag   540
tccaattatg ccgttgtggg tctttatttc tatcctaata aagtggtgga agtagccaag   600
agtattcagc cttcccctcg tggagaattg gaaatcacga cggtcaatca acggttcctg   660
tccgatcggg aactgaaggt ccagcttttg gggcgcggct ttgcctggtt ggatacaggt   720
actcatgatt ctttgtccga agcaagtaca tttatcgagg ttattgaaaa acgtcagggt   780
ttgaaagtgg cctgtttgga aggcatagcc ctgaggcaag gctggatttc tcctgaagag   840
atgaaagcat tggcaggtcc gatgctgaag aatcaatatg gacaatatct gttgaaagtt   900
atcgatgaat tatccataaa gtag   924
```

<210> 609
<211> 1437
<212> DNA
<213> B.fragilis

<400> 609

```
tataattcaa ggagtactgt ggctagaaag aaaaaagaac ttcctctgct ggagaaggta    60
acaataacgg atgtggctgc cgaaggaaaa gccatcgcaa aagtagatga cctggtcgtt   120
tttgtacctt acgtagtgcc gggcgacgtg gtagatttgc aggtaaaaag aaaaaagaat   180
aaatacgccg aagctgaagc ggtgaagttt cacgaactct caccggtacg tgccgttcct   240
ttttgccagc actatggcgt atgcggcggg tgtaaatggc aggtattgcc ctacgcagaa   300
caaatcaaat acaaacagaa acaggtggaa gacaacctcc gccgtatcgg aaagatcgaa   360
ttgccggaaa tctctcctat cttgggatct gctaaaacag agttttaccg gaacaaactg   420
gagttcacct tctcgaacaa acgctggctg acagcggaag aagtgaaaca ggacgtcaaa   480
tatgaccaga tgaacgcagt aggattccac attccgggag cattcgacaa ggtgctcgcc   540
atcgaaaagt gctggttgca ggatgatatc tctaaccgta tccgcaatac gatccgcgat   600
tacgcctacg agcacaacta ctctttcatc aatctccgtt cgcaggaagg aatgctccgc   660
aacatgattg tacgtacctc gagtaccggc gaactgatgg tgattctgat ttgcaagata   720
acggaagagc atgaaatgga tctcttcaag cagttattgc aatatgttgc cgaccaattc   780
ccggaaataa cctctctcct atacattatt aataataaat gtaacgacac gatcaatgac   840
ctcgatgtac acgtattccg tggcaatgat cacatcttcg aggagatgga gggacttcgt   900
ttcaaggtgg gaccgaaatc gttctatcag accaactcgg aacaggcata caatctttat   960
aaggtggcac gcgactttgc cggactgaca ggtgacgaat ggtatatga cctctatacg  1020
ggtaccggaa ccatcgccaa ctttgtgtca cgccaggcac aaaaagtgat cggcatcgaa  1080
tatgttcccg aagccataga agatgcaaaa gtgaatgccg agatcaatgg aatagagaac  1140
accctgttct ttgccggaga catgaaagat atcctgacac aggatttcat caatcagtac  1200
gggcgtccgg atgtaatcat caccgaccct ccccgggcgg gaatgcatca ggatgtggta  1260
gacgtaatct tatttgccga acccaaacgg atcgtatatg ttagttgtaa tccggctaca  1320
caagcgcgtg acctccagtt gctggatgtc aaatatcgtg tgaaagcagt gcaaccggta  1380
gatatgttcc cccacaccca tcacgtggaa aacgtagtgc tgcttgaact taaataa  1437
```

<210> 610
<211> 507
<212> DNA
<213> B.fragilis

<400> 610

```
tataatccaa gcagtaatac aaggtttatt gcatttatag aatataatta tcaaaacatg    60
aagtttaata gaaaggaaaa aactttttatt atgaagaaaa cttatttatg gacggccatg   120
ctttgcacgg caatagcatt ttcggcatgc aaatccaata aagccggaca ggacaccgca   180
agcgaagcaa agactgaaga agcagttata ccgggaagtg ataaagacga aacacggttgc   240
gtcggctctg ccggatacgt atggagtgaa gtgaagaaag attgtattcg tcccttcgaa   300
gcaggactga aaatcagcga aacccaaaaa gacaacgcta cttacgccac ttacattgta   360
tttgctgccg actctgtgca agcagaactc tacacacccg agtctgaagg aagtatcctg   420
ctcgaacgtg cggacaacca atggaaaaac gatacgatca gcgtcagttg caagaacggt   480
caatggagca tttctaaaca gaaataa                                       507
```

```
<210> 611
<211> 945
<212> DNA
<213> B.fragilis
```

```
<400> 611
ccagataaaa gattatttat tgaaatgaag atattattga cgggggcgac tggttttttta    60
ggatcgcata ttgcagaagc cttgctggca aacgatgtta acctgatgat aactaaacgg   120
tcaatgtctt cgttgaacaa ttgtacctct ttcattgatc atgtacaagt cataaactcg   180
gataacccta tctggatatc ccaagcttgc tcttttagcc ctgatattat tattcattca   240
gcctggacgg gggtcctgtc tggcaataga tacgattggc cggtccaact gtctaatatt   300
gactttatga attctttgct ttatatagca gagaaaagta acgtttctaa atttatagct   360
ttgggtagtc aggccgaata tggggatttt gatgggatag tctctgaaaa tgccggcttg   420
tttcctgtca atagctatgg atacgtgaag tccatggttt cccggatggt tggttctttc   480
tgtgatttac gtgggattga ttggtactgg ttaagagttt tttccgtata cggagagcgg   540
gagtcaaacc aatggctgat ccccggtctt ttgactaata tgcttgacaa tatggctggt   600
atggatctga ctttagggca acaacgctac gcttatttat atgtgaagga ctttgccaat   660
gccgtaatga aagtatgttc agggaaaact ccctgcggtg tctataattt atcatcttct   720
actgcgatcg aattaagagt acttcttgaa catttgagag atagattaaa tccggctttt   780
gagttgcgtt ttggtgcgtt gccctatcgt gccggtcaac caatgttggt gcaaggtgat   840
gtgtcgaaat ttgtaaagtc gtttgggcac tttgagaata caccgttaaa tgccggtttg   900
gagtatacta tcacttatta taaaaaacaa catgaaagta tctga                   945
```

```
<210> 612
<211> 261
<212> DNA
<213> B.fragilis
```

```
<400> 612
cgaaggcgaa gagtaatgaa atacgtttat aaaacccagg gtacttgcag cacaaacatc    60
gaattggagg tggagaataa tattgtgaag gaagtagctt tttggggtgg atgtaacggt   120
aatctgcaag gaatttcacg tctggtgacc ggaatgcctg tgtcggatgt cattacgaag   180
cttgaaggga tccggtgtgg ggctcgctct acttcatgtc ccgaccaact atgccgtgct   240
ttgcacgaga tgggtttcta a                                             261
```

```
<210> 613
<211> 618
<212> DNA
<213> B.fragilis
```

```
<400> 613
cctatgttga gcctacaatt tatcacccat caaacagaga attactccta tctggaatcg    60
gcgcgcatgg ctctcgaagg gggctgtaaa tggatccaac tgcgcatgaa agaggcatcg   120
ccggaagagg tggaggcagt ggcactgcaa ctgaaacctc tctgtaaagc taaagaagct   180
atcctgattc tcgacgacca cgtagagctg gccaaaaagc tggaagtgga cggggtgcac   240
ctgggcaaaa aagacatgcc catcggcgaa gcccggcaga tgctgggcga agcattcatc   300
attggcggaa cggccaatac ctttgaagac gtaaagctgc attatgccgc cggagccgac   360
tatctgggca taggcccttt ccggtttacc accactaaga aaaatctgag cccggtactg   420
ggactcgaag gctacacctc catactggca cagatgaacg aggccggtat ccggataccg   480
```

```
gtagtagcca tcggagggat cgtagcggaa gacattccgg ccattatgga aacggggggtg    540
aacggcatcg ccctctccgg agcaatcctg caagcaccgg acccggtaga agaaacaaaa    600
agaattctaa acatataa                                                 618
```

<210> 614
<211> 894
<212> DNA
<213> B.fragilis

<400> 614
```
tattgggttg gctattgtat aataatagag ctgaatttca aaaaaaatac gtattatatg    60
agtaatcaaa gagaagctgg aataacagct tttttacctg tatataatga agaaaaacgc    120
cttaaaaatg tattggagtg ttttcagtgg tgtgatgaaa tcttgttatt agataaagga    180
agtgttgacg atacggtaaa aatagcaaaa caataccctta atgtcacggt tttaacaaaa    240
gagcataccg aaaaatatga ttccaatgaa attgaatatt ttattaagaa ttgtacaaca    300
gagtggtgta tgattgttac agcaagtgat ttgattcatc ccaaattggc gcggaacatg    360
aaagaactta taaataactg taatttcgaa tatgatattg tctctgtacc gtataaacca    420
tattttctag gttgttgtga gaagtattct ccttggtata cagagcacat gaataagatt    480
tttcgggtaa gtgtattgaa tcttaatctc aactctgtac atgctgtttt aactcctaca    540
tcttcccgct tgtatcagat tcctttcact gatcctaaag ttgcttatta tcatttgact    600
catcaaagtg ctgagagtat tatagaaaga aatgtaagat attggaaagg agaggcttct    660
tcttcggaac ccttatccct aataaataaa atcataataa ggactgtgct tcgttttgtt    720
tttttgcgag gtgggttgtt caaaggacgg caagctttag ccttatttta ttctttctta    780
agctattata tgatgactta tgtatgtaaa tgggaatacc agaatggaga agtagaaagt    840
atatacactg ctttgcaaaa ggagattgtt gatctttgga gtaaacctaa ataa         894
```

<210> 615
<211> 360
<212> DNA
<213> B.fragilis

<400> 615
```
gcgaacaatg ggcattgggc gttgagcttc agttcaacca tgaaatacaa ggagcatatc    60
tcgacaaaca catttgccat tgctccttac gcacgttttt cttattatga aaacaagatc    120
gtacgtctgt ttgtcgatgg cggatttggt tttgctacca ctaaggtgaa agatggcggt    180
gatgctgtaa acggtttcga gatcggtctg aaaccgggta tcgctatcaa gttgaaccag    240
catttcagcc tggttgccaa atgtggcttc ctgggatata aggacgatta tatgggtaac    300
ggttttggct ttagcgcaag cagtgaagac cttacattcg gattccatta cgaatttttaa   360
```

<210> 616
<211> 291
<212> DNA
<213> B.fragilis

<400> 616
```
gtgtgtttgg ggataaatga aagtaaatac aaagagggggt gcgtgcggga aaaagaaaaa    60
acggaagaaa tacacaatcc cttcggcagt actaactgca tcaggttctt agggtataat    120
ctcagccacc gggtggcacc cctttgtctt tacggaggca aagtaagtga aaaagaaaat    180
aagaagaaag taaatcgggg attatttcat cgcggagtca tgcggaattt gttttttgccc   240
tttctcaaaa ctcaccataa aaaacacaga gtaacacaga ggcgattta g             291
```

<210> 617
<211> 357
<212> DNA
<213> B.fragilis

<400> 617
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ctgccgaagg gattgtgtat ttcttccgtt ttttcttttt cccgcacgca cccctctttg    120
```

```
tatttacttt catttatccc caaacacacc tatacgaata tgaaagtaca agtgaacaac    180
aaagaagtgg aaacagccgc aagcacactg gcccagcttg ccacccaact gcaacttccc    240
gaaaacggtg tagccatcgc cgtcaacaac cgaatgatac cgcgtccgca atgggacgga    300
ttcgggctgc aagagaatga taacctgatt gtgattaaag cagcctgcgg aggatag       357
```

```
<210> 618
<211> 2730
<212> DNA
<213> B.fragilis
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```
<400> 618
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gccggtatgc gaaacttact tggggcaaa  ggtgcgaacc ttgccgaaat gaatctgatc    120
ggtgtccccg tacctccggg cttcacaatt acaactgacg tttgtaccga atattacgag    180
atgggacagg aaaaggtcgt atctctcctg aaagaagaag tcgaaaaagc tattgcaaat    240
attgagaacc tgatgcgttc aaaatttggt gacgtagaga atccgttgct ggtttctgtg    300
cgttcgggtg cacgtgcatc catgccgggt atgatggata cgatcctgaa cctgggtttg    360
aatgatgaag tggttgaagg tctgacccgt aagaccggaa acgctcgttt tgcatgggat    420
tcttaccgcc gttttgtaca gatgtacggt gacgtagtat tgggtatgaa acctgttaac    480
aaagaagacc aggatccgtt tgaggcgatc attgaagaag tgaaacatgc caaaggcgtg    540
aagctggaca acgagctcga ggtggaagat ctcaaggaac tcgtgaagaa atttaaagct    600
gccgtaaagg cacaaacagg caaggacttc ccgacttgtg catacgaaca gctttgggga    660
gctatctgcg ctgtgttcaa ttcatggatg aacgaacgtg ccatcctgta ccgtaagatg    720
gaaggaattc ccgatgaatg gggtactgcc gtaagtgttc aggcaatggt gttcggtaac    780
atgggcgata cttccgcaac aggtgtatgc ttctcccgtg atgccgctac gggcgaggac    840
ctcttcaatg gtgaatatct gatcaatgca caaggtgaag acgtggtggc gggtatccgt    900
actccgcagc agatcactaa gatcggttcc cagcgttggg ctcagcttgc cggtgtgagc    960
gaagaggaac gtgcatcaaa atatccttct atggaagagg ctatgccgga gatctacaag   1020
cagttggatg aaattgcagac caagcttgaa aatcactaca aagacatgca ggatatggag   1080
ttcaccgttc aggaaggcaa actttggttc cttcagacac gtaacggtaa acgtaccggt   1140
gctgccatgg taaaaatcgc catggatctg ttccgccagg gcatgattga cgaaaagacc   1200
gcgctgatgc gtgtagaacc caataaactg gatgaattac ttcacccggt attcgataag   1260
tctgctttga aacaggctaa agtgctgact cgcggtttgc cggcttctcc gggtgctgct   1320
accggtcaga tcgtattctt tgctgacgat gcagccgaat ggcatgctgc cggaaaacgc   1380
gttgtgatgg ttcgtatcga gacttcaccc gaagatttgg ccggtatggc agttgccgaa   1440
ggtatcctga ccgcccgtgg aggtatgacc tcacatgcag ccgtggttgc ccgtggtatg   1500
ggtaaatgct gtgtttcggg agccggtgca ttgaatatcg actacaaggc ccgtacagtg   1560
gaagtggatg gtgtattgct gaaagaggga gatttcatct ccttgaacgg tagtaccggt   1620
gaagtttatc agggtaaagt agaaacgaaa gcagccgaac tgtcaggcga ctttgccgat   1680
ctgatgaagt tggctgataa atataccgt  ctgcaggttc gcaccaatgc cgacactccg   1740
catgatgccg aagttgcccg taatttcggt gcggtaggta tcggtctttg ccgtacggaa   1800
cacatgttct tcgaaggtga aaagatcaaa gccatgcgtg agatgattct ggcagaaaat   1860
gctgagggac gccgcaaagc tcttgccaag atcttgccat atcagcaagc cgacttcaag   1920
ggaatcttca aggcaatggc cggttgtccg gtgactgtac gtctgctcga tcctcctttg   1980
catgaatttg ttcctcacga tctgaaagga cagcaggaga tggccgatac aatgggagta   2040
agcctgcaat atatccagca gcgtgtcgaa tcgctctgcg aacacaaccc gatgttaggt   2100
caccgtggtt gccgtttggg aaatacgtat cccgaaatca cacagatgca gactcgtgcc   2160
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gaaattcccc gtgcagctct gactgccgac cgtatcgctt cgtctgccga gttcttctcg   2400
ttcggaacca acgacttgac tcagatgact ttcggttact ctcgtgacga tatagcttct   2460
ttccttccgg tttatctgga gaagaagatt ctgaaagtag acccgttcca ggtactcgac   2520
caaaatggtg taggtcagtt ggtacgtatg gcaaccgaaa aaggccgtgc catccgtccg   2580
gacctgaagt gcggtatctg tggtgaacat ggcggtgagc cttcatctgt taagttctgc   2640
cataaagtag gtttgaatta cgttagctgt tctccgttcc gtgtgcctat cgcacgtctg   2700
gcagcggcgc aggcagccat cgaagaataa                                    2730
```

```
<210> 619
```

<211> 1419
<212> DNA
<213> B.fragilis

<400> 619
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attatcatta tgaaacaatc caaaattatc gtagccggca ttgggccggg aagcgaacaa      60
gatatcactc ctgccgtgct cgccgctgta cgcgaagcag atgtagtggt gggatataaa     120
tattatttcc gttttatacg tgattttgtc cgtccggacg ccgagtgtat cgacaccggg     180
atgaaacgcg aacgtgcccg cgccgaacag gctttcgaat atgccgaaca aggaaagacc     240
gtttgtgtca ttagctccgg agatgccggt atctatggca tgacacccct tgatttacgaa    300
atgaaacgcg aacgtcagag taacgtagag atcattgcct taccgggaat cagcgctttc     360
cagaaagcgg cctcactact tggtgcaccg atcgggcatg acttctgtgt catctctcta     420
tcagacctga tgacaccatg ggaacgtatc gagcgccgta tcctcgctgc agcccaggcc     480
gactttgtga cggctgtata caatcccaag agtgatgggc gctattggca aatttatcgt     540
ctgcgcgaaa tctttctgcg cgaaggacgc tcaccggaaa cccctgtagg ctatgttcgg     600
caggctggtc gtgaagaaca ggaaatacac atcaccactc tcgccgcatt cgatccggaa     660
actgtggata tgtttacggt cgttctgatt ggtaactcac aaacatatac atttaaccaa     720
aacataatta ctccacgggg atactatcgc gaaacacgca gtgaagcaac cggtatcgga     780
caagacatca tgatacgcag tttccgcacc atcgagacgg aattgaagaa ccgtgatatt     840
ccactcgacc ggaaatgggc cttattgcat gctatccata cgacagccga cttcgagatg     900
gaacgtttgc tttacactga tcccaatgct gtggcctctc tctatgacgc catccgcaca     960
ggaaatctgc ggactattgt aacagatgta acgatggcag cttccggcat ccgtaaaggt    1020
gcattgcagc gtctgggtgt agaagtgaaa tgttacttga cgatgaaag agtagccgaa     1080
atggcaactt caaagggggat cacccgtaca caagcgggca tccgcctggc tgtggaagaa   1140
catcccgatg cactctttgt ctttggtaat gcccccacag cactgatgga actttgtgat    1200
ctgatccgga aagagaaagc gcaaccggca ggtatcgtag ccgctcccgt agggtttgtc    1260
catgtagaag agtcaaaaca catgacaaag cccttcaccc gcatccccaa actgattgtg    1320
gaaggacgca agggcggaag taatctggct gccaccctgg taaatgccat tctttgctat    1380
cccgatgcgg aacaactcag acccggaaga gacgtatag                           1419
```

<210> 620
<211> 591
<212> DNA
<213> B.fragilis

<400> 620
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agtagaattt ttattccaat gaatataata aaaacatcaa ttgaaggtct tgttatcctt      60
gagccccgtc tgtttcagga tgaccgtggc tactttttcg aatccttcaa tcaggggggag    120
ttcgaatcaa atgtatgtca aacgactttt gttcaggaca atgaatccaa atcgagctac     180
ggtgtcattc gcggtctcca tttttcagaaa cctccttttg cccaaagcaa actggtacgg    240
gtaatcaagg gtgcagttct tgatgtggct gtcgatatcc gcaagggttc tcccacattt     300
ggaaaacatg tttcggttga attgacagaa gacaatcacc gtcagttttt tattccgcgt     360
ggcttcgcac atggtttttag tgtgctgagc gaagaggtca tcttccaata caagtgtgat    420
aatttctatc atccggaagc tgaaggggcg attgcctgga atgatccgga tttgaatatc     480
gactggaaga taccacaaga ccgggtatata ttgagtggta aagactacac acatcctctg    540
ttacataaca tagaattaca gtttgatata aacaatacat tatatgagta a              591
```

<210> 621
<211> 423
<212> DNA
<213> B.fragilis

<400> 621
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tcaatgattt ttatggcaac aacctttgac atacaattgc cacactatcc acgtggcttc      60
catctgatca cccgtgacat ccttctctc cttccggacc tgccggaaaa cggactgctg      120
gttgtgttca tcaagcatac ctcagcaggc atcactatca acgaaaatgc cgatccggac     180
gtgcgtcatg acttcaatac gtttttcaac aaactcgtac ctgacggtgc cccttatttc     240
gtccacaccc ttgaaggccc ggacgatatg agcgcacaca ttaaggcttc actaatcgga     300
acctcagtca gtatccccat ccggaatcac cgtctgaacc tcggaacctg gcaagggatc     360
```

```
tacttgtgtg aattccggga cgggggcgac aaacgcaaac tgagtattac cattttggag    420
taa                                                                  423
```

<210> 622
<211> 471
<212> DNA
<213> B.fragilis

<400> 622
```
ccgggaggta tgcttcgcta ctccggtgtc cccaaagaac atcctgacgt gaacgacatg     60
acaacatccg catctatcga gtcttcgatg gagcgctctc aatctatcct atcttcttcc    120
gctttgaact ggtatgcctt gcgtatcact tacgggcgtg aactggcttt gcaggagtac    180
ctcaattcgg aggggatcga gaatttcatc cccatgcact acgaatatac cattaaaaac    240
gagcgtcggg ttcgtaagct tgttcccgca gttcataatc tggttttttgt ccgttcctcg    300
cgtagttgta tcgatgccat taaagaaagc aggagcgcca cgcttcctat ccgttacatt    360
atggatcgtg aatatcatcg tcccatcatc gttcctgatt cccaaatgcg taatttcatg    420
gctgtctctg cgaattatga tgaatccttg ctttatttcg aacccttttg a             471
```

<210> 623
<211> 1311
<212> DNA
<213> B.fragilis

<400> 623
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tcgttaatca tcaatcacat gtcagtaaag ggattcttct tcatacttgt tttcttcttg     60
gtcgctatca tgggttttct gatttatata tccgaaactg ttgtcgtgaa gtatctctat    120
attgccgaag cattgatgct gctcctgatg ctgtatctta ttttgtttta ccggaaaatc    180
gtgaaaccga tgaacaccat cggcagtggt atggaacttc tcagagaaca ggacttcagt    240
agccggttaa gccatgtggg gcagcaggag ccgaccgtg tggtaaatgt tttcaatcgc    300
atgatggaac aactgaaaaa cgaacggctg cgcttgcgag aacagaatca ttttctcgac    360
ctgatgatta atgcttcccc catgggagtt attatcatga cgctggacga agaggtatct    420
caactcaatc ccatggcgat gaagatgatg ggggtccgtc cggaagaagc cgaggggagg    480
aaattgtcgg aaatcgattc tccgcttgcc ctggaattgg ccgccattcc gaatggagca    540
accagcaccg tccggctgaa cgactcgagt atctataaat gcacccactc ttcatttgtg    600
gaccgcggct tccagcatcc tttctatctg atggaaggat tgaccgatga agtgatgaaa    660
gctgaaaaga aagcatacga gaaagtgatc cgtatgattg cgcatgaggt gaataataca    720
acagcgggca tcacttccac attggatacg gtagagcagg cattgtacga gtcggaaggt    780
atggaggata tttgcgatgt gatgcgcgta tgtaccgagc gttgtttttc tatgagccat    840
ttcattaccc gctttgccga tgtggtgaag attcccgagc cccgttttac tccgaccaac    900
ctgaatgacc ttgcatttac ctgcaagcgc tttatggaag ggatgtgcaa tgaccggaac    960
atccggttgc aactgatatg tgacgaatct ctggacgatg tgaagctgga tgcgtctctg   1020
tttgaacaag tattggtaaa tattattaag aatgcagccg agagtatcgg acaggacggg   1080
cagatcatca ttcgtacttc attgcctaca gctatcgaag tggtggataa cggacccggt   1140
atatcaaaag agactgaagc aaaactcttc agtcccttct tttctaccaa acccaacgga   1200
caaggtatcg gtttgatttt tattcgcgaa gttctgagcc gtcatggctg cacgtttttca   1260
ttgcgtacat acgccgacgg actgacaaga ttcaggattc tatttccgtg a            1311
```

<210> 624
<211> 291
<212> DNA
<213> B.fragilis

<400> 624
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gtgtatttaa ttaaaactac taagaagatg aaaaagattg tattgttttt atttgttgct     60
attgcaactt tatctgttaa ggcacaagac ctttacatgg gaggtaccgt aggtttgtgg    120
cgtaatgatg atgccaatac cacttccttt aaactggctc cggagatcgg atacaacctg    180
agcgaacaat gggcattggg cgttgagctt cagttcaacc atgaaataca aggagcatat    240
ctcgacaaac acatttgcca ttgctcctta cgcacgtttt tcttattatg a             291
```

<210> 625
<211> 462
<212> DNA
<213> B.fragilis

<400> 625

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aatataaaaa tgatggaaaa ttacaaacaa aattacatcc ataagccata tctgttttta      60
gcaatcttat tttctttgct tagttgccaa aaagaggtgg tatcaaaggt aactttcgaa     120
agaaagttat caggaataaa accagaaacc gaatttagac ttgattctct gagaaatgat     180
aaatggcaaa aatgctatat tattccaccg tatcaacagt acaattctgc attaaatagg     240
ataaagttga gaaagcatga tttaaataaa ataaaggaaa atgcaatctc tgatggaata     300
aatacatttg tgtttataaa taacgatgga tcaatatcaa tagaaacagt ttcaagatct     360
atcattgata ttcaagacac attgtcagac tccatatttc tttttatcc cacaacaata     420
atgaaaatgg atagtaaaag aaaaattata gacataaaat aa                        462
```

<210> 626
<211> 1188
<212> DNA
<213> B.fragilis

<400> 626

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acaataaaaa tgagaaaagt tctgtctttt tcggccttt tgattattgg cctttgcta       60
tcacaatact tgccgttatt ggcaggtgaa ggatatgcta ccgtaaaaat tgtatctaac     120
attcttcttt acatctgcct gagtttttatt atgattaacg tagggcgtga gtttgaagtt     180
gataagaccc gttggcgaag ttatgccgga gactacttca ttgcgatggc tactgccgcc     240
atgccttggt tcctgattgc tatctattat gtatttgtgc ttttgccgcc agaattctgg     300
aacagttggg aggcttggaa agagaatctg ctgttaagcc gtttcgcagc tcctacatcg     360
gccggtattc tttttcacgat gctcgcggct attggactta aatcaagttg gatttataaa     420
aagattcagg tcctggcaat ttttgatgac ctcgatacca ttttgttaat gattcccctg     480
cagataatga tgattggttt gcgctggcag ctgatcgtgg ttgtctttat tgtcttctta     540
ttgctttcat tgggttggaa acagttggga aggtataact ggcgtcagga ctggaaagcg     600
ataatgggct attcggtgct tgtatttgtt gctacccaag ccgtttacta ttttagcaag     660
cagctctatg gcgaagaggg gagtattcac atcgaggtgt tgttgccggc ttttgtgctg     720
ggtatgatca tgaaacacaa agaaatagat actcctgtcg agcataaagt ttcaacaggg     780
gtttcgttcc tgtttatgtt cttggtaggt atgagcatgc cgcatttcat tggggtgaac     840
tttgccgaga cacatgccgg aacccattcg gtgacaggtt cgcaggaaat gatgtcgtgg     900
ggaatgatag cacttcacgt attgattgtt tcactgcttt caaatatcgg taagctgttt     960
cctgtgttct tttaccggga taggaagttc agcgaacgcc tggcgctttc tatcggtatg    1020
tttacccgtg gtgaagtagg agccggagtc atctttattg ccctcggata caacttgggt    1080
ggtcctgcat tggttatttc agtgctgacc attgtattga atttgattct gaccggtatc    1140
tttgtactat gggtgaagaa gttggcattg cgaagctata caacttag                 1188
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<210> 627
<211> 936
<212> DNA
<213> B.fragilis

<400> 627

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tctaaaaaaa taaatatggc aacaatatat gacgggatca actatttccc ggtgggcgta       60
aacttcatgg aagagaacgc aatggaagtg atagaagcta aatacggaat aaagggctcg      120
gcaattgtac tgaaactgct gtgtaagata tacaaggagg gatacttcat ccgttgggat      180
gaagagcagt gcctgatctt tgccaacaag gcgggaaggg aagtgcaggc cgctgaggtg      240
cagggcatca ttgagatcct cttcatcaaa gggataatgg acaaaaacag ctatctggaa      300
aacggaatac tgacctcgga aaacatacag aaggtatgga tggaggcgac aaagcggaga      360
aagagagagt tgtcggaact cccctacctg atggtgaaaa cggaaaagga aaaggaaaac      420
gataaaccgg aaaaggaaag cgacaaaccg acaatgcat ccacacaaca ggaaattgaa        480
cgacccaagc cgcttaaaga aggaaaagta gctggcagca caggagatgt agccgttagc      540
ccgggaaatg tagtacacga tgtagccgtt aacgcaaaaa atgcatgcaa ttccggacaa      600
agtaaagtaa agaaaagtag agcaaaggaa aataaagaat taccccctc agttcccccc        660
```

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gagggaagg  aggaagaaag  gaaggaggat  tctgtttctc  tcccgatacc  gggatacgct   720
ttcaatacaa  tgacacacaa  ttatccggga  ctgacggata  cgctccaaag  attggggatc   780
aacgaggtaa  gcgaggtaaa  tgccattctc  aggctatcgg  actatggcag  aaagggaacg   840
acggtgtggc  ggctgattgc  caacacttgc  tggagtgaca  taggggcaaa  aggaaggtat   900
ctgatagcgg  cactgaacag  ggcaaaaagg  aaataa                               936
```

<210> 628
<211> 801
<212> DNA
<213> B.fragilis

<400> 628
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tatatgaaaa  tatcagtgat  tattccttgt  tttaatcaag  gaaaatattt  ggctgaagca   60
ttagattctg  tagtaatgca  gaccttttct  gattgggaat  gtattatcat  aaatgatggt   120
tcgattgata  attccgaaaa  tgttgcttta  tcctatgtag  aaaaggaccc  tcgttttcat   180
tatatatgtc  aaaaaaatca  aggagtatgt  atagccagaa  atagaggtat  agcaatggca   240
caaggagagt  atatcttatg  ccttgatggt  gatgataaaa  tatctcgtaa  ttttttggaa   300
tgtatgtatc  ctattttgga  tgaagaacaa  tctgtgaagg  tagtaacaag  tactgttgtg   360
caatttggta  aaatccatcg  tgtgatacca  tcaactgatt  actctttaga  aaagttaatg   420
gggcgaaatc  tatttgtgat  tacgtctatg  ttccgtaaag  ttgatttga  aaaaacggaa    480
ggttttaacg  aaaatatggc  aaagggctta  gaggactggg  attttttggtt  gtctatgtta   540
gagtctggtg  gtgaagttgt  ttgtgcaaag  caggctattt  tttactatag  aatcagaggc   600
tattctagaa  ataaaagtat  ttctgaagat  tattattcat  tattacgtaa  aactatatac   660
gaaaatcata  aacacttatt  ttctaccatt  ttctttaatc  cgaagtattc  atttgagtat   720
tatttgattg  caaaatctta  tgaatataag  ttaggtaagt  tattatttag  accaatacgt   780
tttttatatg  atctttttta  a                                               801
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<210> 629
<211> 765
<212> DNA
<213> B.fragilis

<400> 629
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aagatgaaaa  ttataactta  taatgtgaac  ggacttcgtg  ccgcagtaaa  caaggggctg   60
cccgagtggt  tggccgagga  aaatcccgat  gtgctttgtc  tgcaggaaac  caaactgcaa   120
cccgaacaat  atccggcaga  ggcttttgag  gcacttggat  ataaagcata  tctctattcg   180
gcacagaaaa  aaggatatag  cggagtagcc  atcttgacca  agtagagcc  cgatcacata    240
gaatatggca  tgggaattga  agaatatgat  aacgaagggc  gttttattcg  tgcggatttt   300
ggtgatttgt  ctgtggtgag  cgtttaccat  ccttcgggca  ctagcggaga  cgaacgccag   360
gcttttaaga  tggtctggct  ggaagcattc  cagaagtatg  tgacggaatt  gcgtaaatca   420
cgtcccaatc  tgattctttg  tggggattat  aacatttgcc  atgaaccgat  cgatattcac   480
gatccggttc  gtaatgctac  caacagtggt  ttcttgcccg  aagaacggga  atggatgacc   540
cgtttcctgt  cggcgggctt  cattgattct  ttccgtacgc  tttatcctca  aaagcaagag   600
tatacttggt  ggagttaccg  tttcaattcg  cgtgccaaga  caaagggtg  gagaatcgat    660
tattgtatgg  tcagcgagcc  ggtacgctct  ttgctgaaag  aagccgttat  tctgaacaac   720
gccgttcact  ccgatcattg  tccgatggcg  ttggagatcg  gctga                    765
```

<210> 630
<211> 582
<212> DNA
<213> B.fragilis

<400> 630
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aattacagaa  ttatgaaaag  aaatcttgtg  tttgtattgt  ttgccctcgt  ttcggttgtg   60
ggcttttctc  aagtgagctg  gaatgccaag  gtgggaatga  atatcagtaa  cttttaccggt   120
gattttgaca  tgaatgccaa  agtaggattc  aagataggag  gtggcatgga  gtatggattt   180
aatgaaatct  ggtcgttgca  accctctttg  tttgtatctt  ccaaaggtgc  caagaaggac   240
gaactgagtg  tgaatgctgt  ttatctggaa  ctgccggtta  tggctgctgc  gcgtttcaaa   300
gtagccgata  atactaatat  cgtgttgagt  gcaggtcctt  attttgcttg  cggtatcgcg   360
```

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ggtaattcca aagtagatct gggcaaaggg cgcttggaag tcgatacctt tggtgacgac    420
ggtctgttga aacgcggcga tgtaggtctt ggtatcggtg ttgccgcgga gtttggcaag    480
attatcgcag ggcttgacgg tcagttcggg tttgtcgatg tcatggacaa cgtaaatggt    540
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<210> 631
<211> 2871
<212> DNA
<213> B.fragilis


<400> 631
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gtctatgaaa atccagccgg cagaggcatt gcacgaagaa taaaagctta tcgcaatatt    180
ttatcatcta tctgcgttgt tttcaagatt ataacgtata tttgcgttca caatcctgat    240
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tcgtatgctc cggaaacacc ttggcataat gacttggtcc gggggttgaa agacggtttc    420
ggtgaatcgg gattgaaagt gaatattaca accgaatttc tggatgccaa tttctggact    480
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gacttgattg ttaccgtcag tgatgaggct tttcatactt tgctgacatg cggagactcg    600
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cgggcactgg cgggcctcag tcagagtacg cgtatgagtt ccgtcagct tagtggtgac    2040
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ccctacagta ttttgggagt atgccagagt atacaacgct ataagacgac cgaagaggaa   2160
ttaaccgcag cgcgtgataa agcacttcag gcggataaat tgaaatcggc tttccttgcc   2220
aatatgagcc atgagatacg tacgccgctg aatgcgattg taggtttctc tgatttgttg   2280
agcgatacca gcgggtttac ggaagaagag gttaagctat ttatagagac tatcaataag   2340
aattgtggac tgttgctggc acttatcaat gatattctcg atttgtcccg tatagaatcc   2400
ggcacaatgg attttcagtt tgccggtcac aatcttccgt tattgatgaa gaatgtatac   2460
gattcacagc gtttgaatat gcctccggga gtgcagttgg tgctgaagtt gccggagaat   2520
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ctgagtattt gccagactat cgtaggacgt ctgaacggga cgattaccgt cgcttcagaa   2820
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<210> 632
<211> 1146
<212> DNA
<213> B.fragilis

<400> 632
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cttgctttca agtctttgc catgtggcgt tcatttccca ttttcaggga gtacatcgga   180
cactccacgg ccagctccgt ctacgaagcc cgtttggcgc tcgaagagtt cggcagtaag   240
gcgcatactt attccccggc ctataccgag gcggacttcc cggagatcat gcgttgcagc   300
agccacatca cgttcaattc cctgtctcaa ttcagccgct tctatccgct gaccgtggcc   360
gaaggcagcg gcatctcttg cggcatccgt gttaatcccg agtattcgga ggtagagacc   420
gaactctata acccgtgcgc tcccggcacc cgtttcggga tcactgccga tctgttgccc   480
gcccgtttgc cgcagggggat cgaaggtttc cattgtcatt gccattgcga gtcatcttcg   540
tttgagcttg agcgcacttt gcaacatctt gaagagaagt tctcgccgtg gttttctcaa   600
atcaagtggc tcaacctggg cggcggccac ctgatgaccc gcaaggatta tgatacccgg   660
catctgaccg gcttgttgca aggattgaaa aagcgctatc cgcatttgcg tatcatcctc   720
gagcccggtt cggctttcac ctggcaaacc ggagtcctca cctccgaggt ggtggatatt   780
gtcgaaagcc gcggcatccg tacggccatt ctcaacgtca gcttcacctg ccacatgccc   840
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ccgtttgtct atcgtctcgg gggcaattcc tgcctgagcg gagattacat ggggtcttgg   960
agtttcgacc atgaactgca ggcaggcgaa cgaattgtct ttgaagatat gatacattat   1020
acaatggtaa aaacgaatat gtttaatgga attcaccatc ctgccattgc tctgtggaca   1080
gcggatggca aagccgaaat cttcaggcag ttttcctacg aagattatcg cgatagaatg   1140
agttga   1146

<210> 633
<211> 1935
<212> DNA
<213> B.fragilis

<400> 633
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gaagaagccg ggaaacctta ttattactca accaaaggtg acgaacagga tatctacctg   120
catcatggca tacgcctgag cggcgccatg acccggagaa ccctgaaagc tttctgtcgc   180
caaaacgaca ttcgcctttt gatagatgcc gcccaccccct ttgccgaaaa gctgcatgat   240
acagtaaccg atgttgcgca tgatctcggc attccctgca ttcgatacga acgcatttac   300
gaccgctctt acctcaaccc gattttcgaa gacaactgcg accctgatga tttgcctttt   360
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aagaagtatg aatgttactt ccgtattctc gaccgtgaca gctcccgtga aatagcccgt   540
caagccggat tcccggaaga tcatctggtg tactatcatc ccgaaacgga gaatctgccc   600
caactcctgc aagaactgtc tccccaggca gtcgtcctga aagagagtgg gaagtccgga   660
ggattcaccg aaaagaaaga catgatcctg gaatatgggg caactcctta catccttctc   720
catcccgaat tagaatatta cgatataaca gtagacggag taaacagtct ccgccgtacc   780
cttgagaaaa tgctgcccga ttacttccca ttgcgtagcg gactcactac cgggagttgt   840
gccgcagccg ctgccatagc tgcttttcga aaactgaaaa atcccatact cgaggatttt   900
aaccggaata tccataccgt ccttcccagt ggcgaaacga ttgagattcc ttgccaatcc   960
gtatccggaa cattctccga cgagaaaatt gaagtcagcg ctaccgtcat caaagatgga   1020
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gcagaagcga aacaggctaa taacgcacct gtacaaactc cggaaacatg ggagttcgtc   1140
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cggtactact atcgatacct gccaaacgtt cccatccatg tcaccatctc agttcccgga   1320
ggtgaagaag tcgccgcacg tactttcaac ccccggctgg gtgtcgtagg cggaatctcc   1380
atcatcggta ccagcggtat tgtgaaaccc ttttcttccg aagctttcgt ccgttccatt   1440
cgtaaggaga tggaagtggc acgtgctaca ggtgcttgcc gtattgtcat caattcggga   1500

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gccaaaagcg aaaaatatat tcgcaatctc tatccggaac ttccgccgca ggctttttgta    1560
cactatggca atttcatagg cgaaacgatc ggaattgcag ccgaactcgg catctcgcgg    1620
ctgaccttgg gagtgatgat gggtaaagct gtgaaactgg cggaagggca cctcgacaca    1680
cacagcaaga aagtcaccat gaacaaggag ttcctcaaag aaattgcccg acggtgtgga    1740
tgtaccccct ccagcataga ggcaatcgac catatcattc tggcacgtga actttggaac    1800
atccttcctg aaaccgaact gcaggctttc tgttccctgt tgatcgaaca atgccaccgc    1860
cactgcgatg tgctgctccc caatggagaa ctaaccatcc ttctgattac cgaagaagga    1920
aaaatcatac agtaa                                                     1935
```

```
<210> 634
<211> 228
<212> DNA
<213> B.fragilis
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<400> 634
ttatcgtatg tttcatcaat agcccctcta cccattaaag aagtaataac cgggaaatgg    60
tgccgtctta tgaaatcatt cagcaaaacc atatccgaat tgcaacatcc tgcccctaaa   120
agcaacatgg gacgatggga cgactccatt aataacctga tttcctccca ggctatcaaa   180
ggattatttta aaatactctc accggaatat ccgatcaatg tttcctga               228
```

```
<210> 635
<211> 1353
<212> DNA
<213> B.fragilis
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<400> 635
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tactcttcat taagtaagat cctcagtggc tttggaggct ttctaacggt ttatttaatc   120
gcaaaaaaat taacattagt agaacaagga tactattata cttttatcag tgtattgtat   180
atacaggtat ttttttgaatt ggggcttaac tctattatca ctcagtttgt tgctcacgag   240
aaagcacatt tagattggaa aggaaaggat gatttagtag gaaaagagtt tcatctctct   300
cgtttagctt ctgtattacg attatgcgtt aaatattatt cctatttggc tataggatta   360
ctgattgttt tgtttatagg tggctatgtc ttttttttcaa taaatagtaa tattggggtt   420
agttggaaaa ttccttggtt actgctttgt gtttcaacat ctttatcgtt cttcttaaat   480
cctttcttat ccttcttaga aggattaaat ttaatgaaag aggtttgttt tatccgtttt   540
attcagcaaa ctgtaagttt gctgatatta tgggtgggac tgataggagg tatgaagcta   600
tatgttggag gatgttcgag tttagctggt ggtgtggcta ttcttatttt tgtttcttac   660
agatacagaa ttttgttttt gaatatatat gggaaagtaa ctattcattt tattaattac   720
aagaaagaga tatttccatt tcaatggaag gtagctgtgg gatggcttag cagttctttg   780
gttttttcagt ttttcaatcc gattctgttt gccacaatag gtagtgctgc tgctgggcaa   840
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actaaagtac ccaatttgtc taaattggtg tcattacgag attttaaaga attggataaa   960
tcattttcta agatactagc tgtattggtg cttttgagtt gtatgggatt tatcattgta  1020
gctttatgtc ttattcagtt taatatactg catattgcgt ctaagttgct tccgatgtcg  1080
ttgttcctaa taatgtcatt atcctctgta ttcacacaga ttacatcctg ttgggctatt  1140
tactttagat gctttaagaa agaacctttc ttaagggtat ctttaattaa tctagctgtt  1200
gttttttttaa tagtctttcc gtgtactctt tattatagat taagtggatt ggtgttgtct  1260
tattctctag ctgctttggt gggtttaata ttgggttggc tattgtataa taatagagct  1320
gaatttcaaa aaaaatacgt attatatgag taa                                1353
```

```
<210> 636
<211> 186
<212> DNA
<213> B.fragilis
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<400> 636
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attctagaaa taaaagtatt tctgaagatt attattcatt attacgtaaa actatatacg   120
aaaatcataa acacttattt tctaccattt tctttaatcc gaagtattca tttgagtatt   180
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atttga   186

<210> 637
<211> 918
<212> DNA
<213> B.fragilis

<400> 637
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aaaatgaaaa aatttatcaa aggagtccgg tttactcctt ccaattatcc ggatgaaata   120
gaagataaaa tacagaaata cagaaaacaa ggttacaaac ttcctccacg caaggtattg   180
cgcacaccgg aacaaattga aggtatccgt gaaagtgcaa agatcaacac agctctgctg   240
aaccacattg cagaaaatat tcgtgaagga atgtccaccg aagagatcga tcgtttggtc   300
tacgatttca ccacgtccca tggggctatt ccggctcctc taaactatga aggatttccc   360
aaaagcgtct gcaccagcat caacgatgta gtgtgccacg gaatccccag ttcaaccgaa   420
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tctgacgcat cacgcatgtt tatgatcggc gaagtcagcc ctgaaaaaca gagattggta   540
caggtcacta aagaatgtat ggagatcggc atagctgccg cacagccttg ggcccgttta   600
ggtgacgtag gtgcggctat tcaggaacat gccgaaaaga acggttatag tgtggtgcgc   660
gacttatgcg gacatggagt gggaatcaaa ttccatgagg aacccgacgt agagcacttc   720
ggacgccgcg gtaccggtat gttgattctt ccgggaatga cttttaccat cgaaccgatg   780
atcaacatgg gaacgtatga ggtctttgtc gactctgctg atgactggac agtctgcaca   840
gacgacggat tgccgtctgc acaatgggaa aatatgattc tgattactga aaccggaaac   900
gaaatattga cttattaa   918

<210> 638
<211> 1011
<212> DNA
<213> B.fragilis

<400> 638
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atcctggccg tcatcatcat gctgttcact ttcgatgtgt cctatgatga actgctggac   120
aacctgcggc gtgccggatt ttatctgccg ctggttctgg tcctttggct tttttatttat   180
ctgattaata cgctttcgtg gtatatcatt cttcgtagta gcggtccggt gaattcattg   240
tcgttcgccc ggctctataa attcacggtt tccggttttg cgttaaatta tgtcactcct   300
gtgggactta tgggagggga accttaccgg attatggagc ttacttcata tgtcggagtg   360
gagcgtgcca catcttcggt catcctgtat gtgatgatgc atatcttttc gcatttctgt   420
ttctggctca gctcggtgtt gatttatgtc tttttttatc cggtcggttg ggggatgggc   480
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aagcgcgcag tccgcttcgc ggaacttcac aaagaaaaac tggaaaccat agaccgtcag   660
atagcactgc ttcatcaaca gcgcaaaagt accttttatt cggcattggg gttagagtat   720
accgctcgca ttgtgggggtg tcttgaagtc tggttgattc tgaatgtatt gactacggat   780
gtcagttttg tcggttgcat tctgatcgtc gctttctctt ccctactggc caatctgctt   840
ttctttcttc ccatgcaatt aggggggcagg gaaggaggtt ttgccctggc ggtagccggt   900
ttgtctttat ccggagcata tggggtattt gccgctctga ttacgcgggt gcgggagatg   960
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<210> 639
<211> 849
<212> DNA
<213> B.fragilis

<400> 639
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tataagatcg atttgaaaga ctatgtaggc aaagagtttt gtctggatca ggacactgcc   180
catttatcca aattggtggc agcgctccaa gtggtccgtt atgatgattt ttcctccggt   240

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gcttatagcc ggtccgcagt catcttgtta ccggagaatc ggttggcttc gggcaatgaa      300
atctgtttgc gtacgaacaa aaacgaatct gccgcctttg ccgaacaatt gatgaaggat      360
gccccctccc agtatcgggt gggcaatctt tttctgacta aggtaagttc attccgggac      420
atacggcata cgttccagtt ggacgatgtg aatactttac gtaactatct ggtaggtatg      480
ggcttttttgc tgctcaatat ttttctgggg ctattgggaa cattctggtt ccgcacccag      540
cagcgtaaag gtgagatggc gctgatgatg gcagtaggag ggagtaagca aagcgtattc      600
tttcgtttgc tgagcgaagg ttggctgatg cttcttctgg ttactccgtt ggctattggt      660
gtcgatttct atatcgcaaa gagtgaactg acaccttcgt ggtacttttc tacttttttct      720
gtcggtcgct ttatgttgtg cgaaggcatc acgttactgt tgatggcact gatgatcttg      780
gcaggtatct ggttcccggc ccgtcagtct atgaaaatcc agccggcaga ggcattgcac      840
gaagaataa                                                            849
```

```
<210> 640
<211> 441
<212> DNA
<213> B.fragilis
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```
<400> 640
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gcagttactt ctgttgcaag tgtgaattgt tttgcctgct caaaggcatt ttgtccggtc      120
gagccatcaa gcaccaacaa cacctcgttt ggagcatcag gcactacttt cttcattaca      180
tttttaattt tcgtcagctc gttcatcaag ccaactttat tgtgcaaacg tcctgctgta      240
tcaataatca ccacatcagc gttattagct actgcagaac ttaacgtatc aaacgcaaca      300
gaagccggat cggcccccat cttttgttta atgaccggaa catccactct ctcgccccat      360
atcaccaatt gctccactgc tgctgcacga aaagtatcgg ctgcccccaa atatacagat      420
ttaccggctt tcttaaattg a                                               441
```

```
<210> 641
<211> 1092
<212> DNA
<213> B.fragilis
```

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<400> 641
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ctgataggag aacaggcgaa agtgcaatta caagtagcga tggatgcgaa gcagagggct      180
gttttttccgt catttacaga tacattggta cgtggtgtgg aaattgtgga tattgctaaa      240
cctgatacac aatatttgaa tgatcgccag agaatgctga ttactcaaga atatacggta      300
acttcttttg attcggcatt atattatatt cctcctatgg gagtaaagat tgataataaa      360
gagtataaat caaaggcgtt ggcattgaag gtatattcaa tgcctgtaga tacgttacat      420
cctgatcaat ttttttggtca gaagactgtc atgaaagctc cctttgcctg ggaggattgg      480
tatggtttga ttgcttgctc ttttctggca ttaccattgc taggattgct tatttatctg      540
atcatccgta tccgtgataa caagcctatt attcgtaaag tgaaagttga acctaagttg      600
cctccacatc aattggcgat gaaagagatt gagcgaataa agactgagaa aatttggcaa      660
aaaggacaat cgaaggagta ttatactgaa ttgacagatg ctcttcgtac atatattaaa      720
aatagatttg ctttaatgc attggagatg acttcatccg aaataataga taaactgctg      780
gaatttaatg ataaagaagc tatatcagat ttgaaatatt tattccagac agctgattta      840
gtaaagtttg ccaagcatga tccgcagatg aatgagaatg atgcgaattt gatcaatgca      900
attgacttta taaatgaaac aaaacaattg gaagaagaga atcagaagcc gcaacctact      960
gaaatcacga taatagaaaa cgatctttta cgtacgaaga tattgctgat ctgtggtatc     1020
gtattcctgt cggcagctct tattgcgact ttcgtctata ttgggttgca actctataat     1080
ctatttggat aa                                                        1092
```

```
<210> 642
<211> 288
<212> DNA
<213> B.fragilis
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```
<400> 642
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gacatgagaa caataacatt taatgaactc cgtaaaatta aagattcatt gcctagcggt      60
agcatgcata gaatagcaga cgaactcaat ttaaacgtcg atacagtgag aaacttcttt     120
ggtggtcata attttaagga agggaaaagt gtcggaatac atcttgagcc tggtccggat     180
ggtggattgg ttatgattga tgataccact gtgctcgatc gggcattaag aatattggat     240
gaattaaata tgagtaaaga agaagctacc gaatctgtgc aggtttaa                  288
```

<210> 643
<211> 699
<212> DNA
<213> B.fragilis

<400> 643
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atctcccgtg ctataatttc ttcggcagtc aatttaggag aaccttcgtc ttctatcacc      60
tttttaaat tatctgtagt ttcttgccct gtatctccag tgacctggat tggctcttca     120
gaattttcca ctactttatc caatccaccc tcttctcgaa cctcagcaat ggatgaacct     180
tctactacag cttcactacc tttatgtatg ctaacatctt caacagtttc aagtatgtca     240
atatcatcta caacctctgt cctttcggat tccttcataa cttccgaaac gtcttctgca     300
acttccacat ctgacgacac aacatcctgc ccttttgagg tttccggttc tactttccca     360
ttcgcctctg tttcaaccac cttctcctct gcttttgctt cctctctctc tacggtctct     420
gttattaacg gaagctcagt tgtttcggat atattccctg attcttcctc caattcctct     480
attggcgtat cttccaagac tgtattctca ttcagcacta ctgtttcgaa atgtgaaaaa     540
ggtctattta tgatatctct taaagaaggg tcaggagtaa aagaaatctt agtatgtccc     600
tctattttaa tacgttcacc cgtattgaca tttacacttt cacgactatt gaccctatc     660
aatttgaatg tacccaatcc tttgattttc acatattga                           699
```

<210> 644
<211> 723
<212> DNA
<213> B.fragilis

<400> 644
```
gtagtaatgt atatgtcaag aaataaatat atattgtttg ctctgttgct atcgctttct      60
gcgggtgcgt ttgcacaaaa agccgagcgt gattatatcc gtaaaggcaa tcgtctgttt     120
aaagacagtg tttttgtgga tgctgaagtt aattaccgta aagcattaga ggcaaatcct     180
aagtctacta tttccatgta caacttgggt aatacgttgt cgcagcagca aaagttcaaa     240
gatgcgatgg aacaatacgt tgcggcaacc agtatagaaa aagataaagc taaactggga     300
caaatttatc ataatatggg agtgttattc cagtctggta agattatca aaaagcggtt     360
gaagcttata agatgtcttt gagaaataat ccgaaagacg atgaaacccg ctataatctg     420
gcattagctc aaaagttgct gaaggatcaa cagcaaaatc agcagaatca agatcagaat     480
caggatcaga ataaagatga tcaacaaaag caacaagata aaaaagatca gaataagcag     540
aatgatcaaa ataaagatca acaacagcaa caacctccta aatcagagaa aaatgataac     600
gaaatgtcta aggagaatgc ggaacagctg ctcaattctg tgatgcaaga tgaaaaaggg     660
gttcaggata aagtgaaaaa gcaacagact cttcaaggaa gacgtctgga aaaagactgg     720
taa                                                                   723
```

<210> 645
<211> 192
<212> DNA
<213> B.fragilis

<400> 645
```
gaaatagatt tcacctattt ctcttttgt gttacgctat tgttcaggat cagatcaagc      60
aaaaaaaaga ggctgcccaa tttctcgaat caggcaaccc ctttcacaaa aatctttgcg     120
aaaaaagatc tatttgatca ttacatcatt ttctcgattt cttcgaattc cggtcccata     180
ttcaggttgt aa                                                         192
```

<210> 646
<211> 1068
<212> DNA

<213> B.fragilis

<400> 646

```
atcctacttt tatcattact tttgcatcgt ttaaatatca aaaagcgtat gagtacaatt      60
atattaggaa ttgaatcttc ctgtgacgat acatcagctg cagttattaa agatggttat     120
ttgttatcga atgtggtatc tagccaggct gtacacgaag cttatggtgg agtagtaccg     180
gaattggcat cgcgtgctca ccaacagaat atagtacctg tggtgcatga agcgttgaag     240
cgtgcaggag tgaccaagga agagttgagt gcggtagcct ttacaagggg gcctgggttg     300
atggggtcat tgctggttgg agtatctttt gcaaagggtt ttgcacgttc attaaatatt     360
ccgatgattg atgttaatca tctgacagga cacgtgttag cgcattttat taaagaggaa     420
ggagaagcaa atgaacagcc cgattttcca ttcctttgtt tgctggtatc cggaggtaat     480
tctcaaatta tattggtgaa agcatataat gatatggaga ttctgggaca gactattgac     540
gatgctgccg gagaagcaat tgataaatgt tcgaaagtaa tgggacttgg ttatccgggg     600
ggacctataa ttgaccgttt ggcacgtcag ggcaatccga aggcttatac ttttagtaaa     660
cctcatattt ctggtttgga ttatagtttt agcggattga aaacgtcgtt tctttactct     720
ctgcgtgatt ggatgaaaga ggatcccgat ttcatcgaac accataagaa cgatttggca     780
gcttcgcttg aagcaacggt agtagacatt ttgatggata aacttcgtaa agcagccaag     840
caatataaaa ttaatgaagt ggctgtagcg ggcggtgttt ctgctaacaa cggtttgcgt     900
aatgcctttc gtgagcatgc agagaaatat ggttggaaaa ttttttattcc caagttcagc     960
tatactacag ataatgccgc aatgatcgct atcaccggat attttaaata tcaggataaa    1020
gatttctgct ctatagaaca gcctgcttat tcacgtgtaa ctttgtaa               1068
```

<210> 647
<211> 651
<212> DNA
<213> B.fragilis

<400> 647

```
agaagatacc ataaaattga taaaaagatg tttcgatttg aagaacctgc atatttatat      60
ttgttgctgc tgctaccatt gctggcagcc ttctaccttt attctaatta tagaaagagg     120
aaggctattc gtaaattcgg agatccggtg ttgatggcac aattgatgcc tgatgtatct     180
aaatatcgtc cggatgtaaa attctggttg ttatttactg ccataggtct atttgctgta     240
ctattggctc gtccgcaatt cggctctaaa ttggagacag taaagcgcaa aggggtggag     300
gttatgattg cattggatat ttcaaattct atgcttgccc aagatgttca gcccagtcgt     360
ttagaaaaag ctaaacggct tatatctaaa ttggtagatg gtatggagaa tgacaaggta     420
ggaatgattg tctttgcagg agatgccttt actcagttac ctataacaag cgattatatt     480
tctgctaaaa tgttttttgga atcaatcagt ccttcgttga tatctaaaca gggtacagct     540
atcggtgctg ctatcaatct tgctgcccgt agttttactc cgcaagaagg agtgggacgt     600
gctattgtgg tgattaccga tggtgaaaat catgaaaggg ggagctgttg a               651
```

<210> 648
<211> 984
<212> DNA
<213> B.fragilis

<400> 648

```
tgtattatac aaataattgt aatcatggga ttttttagtt ttttctcaaa ggaaaagaag      60
gaaactttag ataaaggatt atctaaaacc aaagaaagtg tattcagcaa gattgcccgt     120
gcggtggccg gaaaatcgaa ggtggatgat gaagtgttgg ataatctgga agaggtactt     180
atcacatcgg acgtaggggt agagactact cttaatatca tcaagcgtat cgaaaaacgt     240
gcagcagaag ataaatatgt aaatacacaa gagttgaatt cgattcttcg tgaagaaata     300
gctgcattac tgactgaaaa taattcggat gatgttgccg atttcgatgt tccggtagag     360
aaaaagcctt atgttattat ggtggtgggt gtaaacggag ttggtaaaac aaccactatt     420
ggtaaactag cttatcaatt taagaaagcc ggtaaatctg tatatttggg ggcagccgat     480
acttttcgtg cagcagcagt ggagcaattg gtgatatggg gcgagagagt ggatgttccg     540
gtcattaaac aaaagatggg ggccgatccg gcttctgttg cgtttgatac gttaagttct     600
gcagtagcta ataacgctga tgtggtgatt attgatacag caggacgttt gcacaataaa     660
gttggcttga tgaacgagct gacgaaaatt aaaaatgtaa tgaagaaagt agtgcctgat     720
gctccaaacg aggtgttgtt ggtgcttgat ggctcgaccg gacaaaatgc ctttgagcag     780
```

```
gcaaaacaat tcacacttgc aacagaagta actgctatgg ctataaccaa attggatggg    840
acggcaaaag gtggcgttgt tatcggaatt tcagatcagt ttaagattcc ggtgaaatat    900
atcggattgg gtgagggtat ggaagaccta caggtgttcc gcaagaaaga atttgtagac    960
tccttatttg gagagaatgc atga                                           984
```

```
<210> 649
<211> 1200
<212> DNA
<213> B.fragilis
```

```
<400> 649
ataagagata aagtcagaat cccaattggc aaaacaattg ggatttctta tttgttgaat     60
tcaataaata aacgaattat ggaagagaaa ttagtaactt tagctattct gacttataca    120
aaagctcaga tattgaagaa tgttcttgag aatgagggta tagagacgta tattcacaat    180
gtaaaccaga tacagccggt tgtttcatcc ggtgtgcgtt tacgtattaa agaaagtgat    240
ttgccgcgtg cattgaagat taccgagagt tctgcctggc ttgctgaaag tatagtagga    300
gagaagaccc ctaaagtgga gcatcgcact aagaaggtcc ttattccggt tgatttctct    360
aactattcaa tgaaagcatg tgaatttggt ttcaattttg ctaaatcttt tgatgcggag    420
gttatcttgc tacatgtcta ctttacgcca atttatgctt catcattgcc atatggagat    480
gtatttaact atcagattag tgatgaagag actgtgaaga atgtattgca taaagtacat    540
gatgatctga atactctgtc ggagaagatt aagcaaaaag ttgcatctgg agagtttcct    600
gatgtcaaac atacgtgtgt cttgcgcgaa ggtatcccgg aagaagaaat actcagatat    660
aataaagaac atcgtcccag aatcattata atgggtactc gaggtaagaa tcagaaggat    720
attgatctta ttggtagtgt aactgccgag ataattgaac gtagtcatac tacagtactg    780
gctatccccg aaaatactcc tttcaatcgt ttcaatgaag tgaaacggat tgcctttatg    840
acgaactttg accaacgtga tttgattgct ttcgattcat tcatcaatgg acttagtcca    900
tttcattttt ctgtttctct tattcattta tcggatgtaa aagatacatg gaatgaaata    960
aaattagctg gtattaagga ttatttccaa aagcaatatc cggatcttga gatttattat   1020
gatgtggtga tgagtaatga ttttctgaat agtttggata attacattaa aacaaatcag   1080
attgacatta tcacattaac ttcttataaa cggaatatat tttcccgttt gttcaatccc   1140
ggtattgctc gtaagatgat cttccattca gatacaccgt tgttagttat taacggatga   1200
```

```
<210> 650
<211> 369
<212> DNA
<213> B.fragilis
```

```
<400> 650
cttttattca acgcattcat cggtattttt cccgccaata cccgtttttac gttttcaaag     60
acagcctcgc taaagatcag tctggtaccg aagtatttgc aaagagtctg tttggtaata    120
tcatctttgg tgggtcccaa gcccctgtc actagtacaa tatttgccct tttcatcgaa     180
gcatctacag cttcaataat ctcatctgcc cgatctcgta cagacacgac acgaattacc    240
tctataccta ctttatttaa ttcgcgcccc atccatgccg aattggtatc agtcacctgt    300
cctatcaaca gttcatcacc aatagttatt atctccgcaa acatagggct cttacaaagt    360
tacacgtga                                                            369
```

```
<210> 651
<211> 1848
<212> DNA
<213> B.fragilis
```

```
<400> 651
ttgatgataa aaacttcaga tgaaatgaga aaattgattt tcttattgat tgcactggta     60
gccatgacta cgcaagcgca ggctgacgga aaggtagtgt ttactgcatc tgcccccgat    120
gctgtagtag taggtgacca gttcaggtta tcgtatacgg taaatacgat aaaagtacga    180
gattttcgtg tgccttctat taaaggattt gaggtgttaa tgggacctaa ccgttcacaa    240
cgtatgcaat cgattaatgg ggttactaat aatagtatta cctttactta tatcttaatg    300
gctacggctg aaggagagta ttctattcca ggtgcaacga ttacggctga cgggaatcag    360
atggtttcta attcggtaaa aattaaagtt cttccttcgg ataaaaccgg gaatacggca    420
```

```
gatggcaaag gaactgcatc gtctggcaat caaagtggaa cgtcttcctc tgtttctaac      480
caagacttac ttataactgc gacggccaat aaaacgaatg tatatgagca ggaagccttt      540
ctattaactt ttaagattta cacaagagag tctcaacttc gctttgagaa tgtgaagctt      600
cctgatttta agggatttca ttcacaagaa atagagatgc ctgctaatgc aaaatggtca      660
caggaacatt ataagggaaa gaactatttt acgacagtgt atcgtcaatt tgtattgttc      720
ccacagcagt ctggaaaact gactattgag cctgcacgtt ttgatgctac cattgctaaa      780
gctgtacaat ctgatgatcc gtttgatgct ttctttaatg gtggaagcaa ttatgtgaat      840
gtaagtaagg tgattgtaac tcctaagatt acggttaatg tgaatccgtt accgacaggt      900
aaacctgcca atttctccgg aggagtaggg gagtttagta tcacttcttc cattaattct      960
aaagaagtga aaacgaatga tgctatcaca ataaagttag tgatttcggg aaccggtaat     1020
ttaaaattaa ttgcaaatcc ggaaataaaa ttcccggaag attttgatgt atatgatcca     1080
aaggtggata gcaaagttcg tttgactcaa gaaggacttt ccggtaataa agttattgaa     1140
tatcttgcta ttccgagaca tgcaggagtt tataaaatac caggagtatc cttcagttat     1200
tttgatatca agtcgaaatc ctataaaaca ctgaataccg aagattatga ggttaaggtg     1260
gaaaaaggag caggaaatgc agatcaggtt attgccaact ttactaataa agaagatctg     1320
aaagtattgg gtgaagatat tcgctatata aaactaaatg atgtgaagct tcagccaaaa     1380
gataatcttt tgtttggctc tttactttat tggctattct acattgttcc cgccgtggtg     1440
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atgcgtacaa agaaagccaa taaagtggct actaaacgaa tgaagttagc tggtaaattg     1560
cttgcggaga atagcaagga ggcattttat gatgaagtac ttaaagctct atggggatat     1620
atcagtgata aacttaatat tccggtttct cgtttgtcta aagataatgt agaagagaaa     1680
cttagaaatt atggagtcag tgacgaatta ataaaggatt tcctgaatac tctgaatgaa     1740
tgtgagtttg cacgttttgc tccaggagat gagagtcagg ctatggataa agtttattca     1800
tcgtcattgg aagttatgag taagatggaa aattcaataa aacgctaa                  1848
```

<210> 652
<211> 282
<212> DNA
<213> B.fragilis

<400> 652
```
aactataaaa ataagatga aatgtcgaag atttgtcaaa ttaccggaaa gaaagccatg       60
attggcaaca atgtttcaca ctcaaagaga agaactaaaa gaacctttga tttgaacttg      120
tttaacaaaa agttctacta tgtagaacag gactgctgga tcagcctgag cctctgtgct      180
gctggtttgc gtattattaa taagaaaggt ttggacgctg ctttgaatga tgcggttgcc      240
aaagggtatt gtgattggaa aaccattaaa gttgttggct aa                         282
```

<210> 653
<211> 840
<212> DNA
<213> B.fragilis

<400> 653
```
gtcatgaaaa aaatattgtt tattgctttg ggtttgttaa tggcagtaac ttctttcggg       60
caggattcgt taataacaga ttctactcag atgatacagg gagatactgt cagtatccat      120
aatgcagagt tttccggttc caaattagaa gatgccacaa aagctgaggg agatagtgca      180
tatatcagaa atgactttgc gtctgcaatc cagatttatg aatcactttt gcgtaaaggc      240
gagtcggccg atgtatacta taatcttggt aatagctatt ataaaataaa tgagatagca      300
aaagccattt taaactatga aaaggccttg ttgcttcagc ccggtaacgg agatattcgt      360
gccaatttgg agatagctcg tggtaagact gtagataaag tagaagttgt tcctgagata      420
ttctttgtta catggacaaa ggcattaatt aatagtatga gcgtggattc atgggccata      480
tggggggattg tgagtttctt gctgctaatt gtctctctat atttctttat tttctcgaaa      540
caagtggtgt tgaagaaagt cggtttttatt acaggcatta tcttttgat agttgttgta      600
atggcaaata ttttttgcttc taagcagaaa gaagagttgt tgaacaggga tactgcgata      660
ataatgagtc cgagcgtaac ggttagaagt acacctagtg aaaatggtac cagcctattt      720
attcttcatg aagggcataa ggttaacatt aaagatgatt caatgaaaga ctggaaagaa      780
atccgccttg aagatggaaa agtgggatgg gtgccggttg gttcaattga aattatttaa      840
```

<210> 654

<211> 207
<212> DNA
<213> B.fragilis

<400> 654
```
aaagaggaga aactgattat ggcaaagaaa gcaaaaggta atagagttca ggtgattctg      60
gaatgcacag aacacaaaga tagcggtatg ccgggaacat ctcgttatat cacaactaag     120
aacagaaaaa atactactga aagacttgag ttgaagaagt acaacccaat tctgaaaaga     180
gtaacagtac acaaagaaat taaataa                                         207
```

<210> 655
<211> 3390
<212> DNA
<213> B.fragilis

<400> 655
```
tatttaaacg atgcaaaagt aatgataaaa gtaggattca taacgaacta ttttatattt      60
ttgttctcaa aatcaaaaca accgcctatc agaacgctga agaagactgt acgttgggtt     120
atcggtatca tattaggtat atatatcgga actattattt tgctgaatat tccatatatt     180
cagcgaaata tgactacgtt tgtcacaaaa gaactatccc ggactttggg tacagaactg     240
actatcggta agatagacat tggattatta aaccgtatca ttatagatga tgtattgctc     300
gacgatcaat cgggaaaaga aatgctcaaa attacacgtc tttctgccaa atttgatatt     360
attcctttat tcaacggaaa aatcacaatc agcagcgtgc agttatttgg cttttaatatc     420
aacttgaata aacccgctcc gcacatggag ccaaatttta aattcgtctt ggacgcattt     480
gcatccaaag atacagtaaa aacaaaaaag gacattgatc tacgtattaa ttccatatta     540
atacgccgtg gtaaactatc ctacgacgta ttatcggaag aagaaacgcc cggaaagttt     600
aacccgcaac atatcaaact acacaatatc attgccaaca tttcactcaa ggcacttcaa     660
aacgattcga tcaatgcagc catcaaacgc ctgagtgtag acgaacaatc gggctttgaa     720
ctacgaaagt tgagcctgaa agtcattgct aataacaaag gcatgaaaat agaaaatttc     780
gcaatagaaa tgccgggtac cgaaatgaaa atggatacta tccgaatgga atatgacagt     840
ttgaaagcac tcaaccattt tgccgataac gttcgcttct ctttccgtac tttaccatct     900
catgtgactt tgaatgacat ttcagctttt gtcccggcat tatccaattt taaagaaaaa     960
ctagatctca acattgatgt agaaggtacg ctcaatcaac tgaattgcag aacattggaa    1020
atcaacgcag gagataagtt ccgactaaaa ggagatgtat ctttacaaga cttatcacgt    1080
cctcaagacg cttacgttta tggacatctg gccaatctct ctgccaacaa agagggggatc    1140
ggattttttag tgcgcaatct aagcccgcac tataatggcg ttccccctgt attacaacac    1200
ttaggaaata cctcttttca tggtgaaata tcagggtact ttacagactt ggttatgtac    1260
ggcctgttcc gtactgacat aggctccgtc caaaccgact aaaagcttag ttccgataaa    1320
gctaaagcgc tgttttctta ttcaggaggc gtaaagacca ccgattttga gttagggcaa    1380
ctgctaggaa acaagcaatt gggcaagatt acctttaatc tggatgtccg aggaaaccac    1440
tacaagagcc aatatccttc cattacgtta aaaggtttga tagcatccct cgaatacagt    1500
aattataaat atgaaaacat cacgctggac ggagaattca aacgcggtgg ttttgacggt    1560
aaagtggcat tgaatgacga aaacggttcg gtacatttaa acggcaacat caatgtagtc    1620
gaaaaagtcc ctactttaa cttcaatgca gtcatagaca aaatacgtcc acacgacctg    1680
aatctgacaa aggagtatcc ggatgcagaa ttttctttga agctaaaagc taatttccgg    1740
ggtggttcca tcgatgaaat gatgggtgaa atcaatatag acagcttaca atttaccgca    1800
ccagagaaga gctattttct ggataatatc aacatcactg caacccgcca agataaagag    1860
aaccaattga aactaacctc cagtttctta aaagcaagta tcgaaggcaa ttacctgtat    1920
catacgcttc cggcaagtgt tatgaacatt atgcggcgat atattccttc actaattcaa    1980
ccggataaaa agcctattaa aaccaataat aactttagtt tcgatattca catatttaat    2040
acagaactgt tgtcgacagt atttgacatc ccattgaaaa tatattcaca ctcgactgtg    2100
aaaggttact tcaacgatca ggcacaacgc ttgcgtgtag aaggctattt ccacgtttta    2160
caatatcaaa acacgtttat cgagtcaggt ttggtacttt gtgagaatcc taccgatcag    2220
ttcaaagcaa aggtccggtt caataaccta aagaaagaaa gtgctgtaag catctctctg    2280
gacgcacaag ccaagaatga cactataaat gccaatatca actggggtaa caatgccatc    2340
agtacttata gcggacgatt atctgccgcc gccagtttct tccgcgcagc cgaagaaaag    2400
tccccactga aaactgtcgt agatattaaa cagacagaca tcatcctgaa tgatactcta    2460
tggcaggttc atccgtcaca agttgtcgtc gattcaggaa aaatagatgt gaatgatttc    2520
tattttttcac atcaggaccg tcatatccgt atcaatggac gcatttcaga acaagccaaa    2580
```

```
gatacattaa aagtagaact aaaggacatc aatgtaggct acgtattcga tgtggtaaac   2640
tttgacgatg tggacttcaa aggagacgct acgggaacag catatgccag tggcatttta   2700
aaagaaccgg tcatgaacac ccgcctgcat tttaaaaact tcacctttaa tgatgcctca   2760
ctgggggcta tggatatttta cggtgcgtgg aagaacgaca tgcgtgctat cttttcttgat  2820
gcacacatgg aagaagaagg agtgtcgaag acgcatgtca tcgggcatgt ctatccgtta   2880
aaaccggaaa gcaaactaga cttgaatata gagacggatc atacgaatat ccaatttctc   2940
caatacttca tgcgttccat tgttgaagac ttgcatggac gtaccagtgg taaagcccat   3000
ttctacggaa agttcaaggc actcaatatc gaaggaaacc tgatgacgga cgcatcctta   3060
aaaataggaa tactgaatac ttcgttcacc gtaacagaca ccatccgttt gtccaccagt   3120
ggcattagct tcgataatat acgcatagca gatatggaag gacatcaggg tactatgaac   3180
ggcaaactga atttccgaca tttcagggac ctaagttatc atttcgaatt caacgtaaac   3240
aacatgttac ttatgaatac gaaagaaaat ccggatatta acttttacgg aaaagtatat   3300
ggaaccggta atgcaatgtt gattggaaac ccgcaggaat tacaagtcaa tgcagctgtc   3360
actaccaatc gtaacaccaa ttttgtctag                                    3390
```

```
<210> 656
<211> 1479
<212> DNA
<213> B.fragilis
```

```
<400> 656
aagataagtt taaagaaaca tttccgtatg aatgaaaagt tgactataca agatcttgtt    60
gaactactgg ttaacagaca tgaggtttct caagaagatg ctgatgtttt cgtccgggag   120
tttttcttat tgatagaaca agctttggac gctgatcaat atgtgaaaat caaaggattg   180
ggtacattca aattgatagg ggtcaatagt cgtgaaagtg taaatgtcaa tacgggtgaa   240
cgtattaaaa tagagggaca tactaagatt tcttttactc ctgacccttc tttaagagat   300
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gaaacagagg cgaatgggaa agtagaaccg gaaacctcaa aagggcagga tgttgtgtcg   540
tcagatgtgg aagttgcaga agacgtttcg gaagttatga aggaatccga aaggacagag   600
gttgtagatg atattgacat acttgaaact gttgaagatg ttagcataca taaaggtagt   660
gaagctgtag tagaaggttc atccattgct gaggttcgag aagagggtgg attggataaa   720
gtagtggaaa attctgaaga gccaatccag gtcactggag atacagggca agaaactaca   780
gataatttaa aaaaggtgat agaagacgaa ggttctccta aattgactgc cgaagaaatt   840
atagcacggg agattcaaaa agcagaagta tcgactatcc ctgtaaaaaa ggaaaagcgc   900
ccaaagaagg aagttaaacc ggaaaaccaa aaatctcctg ttccttactt aatagtaatt   960
atagtagttg ttatgtcgct ttgcggtgca gcattagttt ttatttatta tccggatttg  1020
ttttctaaaa aagaatcgga acagtcaata accacagaga ctgtagagaa aaaagaaccg  1080
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aagactccga atcaacagga gataaaacag atgtctgagc gtgtcaatgt gtcggagaaa  1200
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attaaagaag gtgaaactct gactagggta tctctacggt tttatggtac aaaagattta  1380
tggccctata tcgttaaaca taatcgggga gtgattaaga atccgaataa tgtaccgtat  1440
ggtactgtac ttaaaatacc ggaattggtt aaaaaatga                         1479
```

```
<210> 657
<211> 2543
<212> DNA
<213> B.fragilis
```

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<400> 657
gaagactgct tgaacaagac agaattataa agattaacat cgaggaggaa atgaagtcat    60
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gatttaagcc cgttcaccgc agaattctct acggaatgat ggaactggga aatacgtcag   180
acaaacccta taagaaatca gccagaatcg taggtgaagt acttggtaag tatcacccgc   240
acggagactc ttctgtatat tttgcgatgg tacgtatggc tcaggaatgg gcaatgcgct   300
atccgctggt agacgggcaa ggtaacttcg gttctgtaga cggcgacagt cctgctgcca   360
```

```
tgcgttacac tgaagcacgt ctgaacaaat taggtgaaga aatgatgcag gacctctaca    420
aagagactgt agatttcgaa cctaacttcg ataatacgct gatggaaccc aaagtgatgc    480
cgacacgtat tccgaatttg ctggttaacg gtgcttccgg tattgctgta ggtatggcaa    540
ccaacatgcc gccccataat ctgtctgaag tcatcgatgc ctgcgaagca tatcttgaca    600
ataaagatgt gaccgtagag gaactgatgg aatatgtaaa agcgcccgac ttccctacag    660
gaggatatat atatggcata agcggcgtac gtgaagccta tcttacggga cgcggacgcg    720
tggttatgcg cgcgaaagca gaaatcgaat ccggacagac acatgataag atcgtcgtta    780
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gtctgattat cgcttcggat aatattgacg aagtaattcg tatcatccgc gccgccaaaa    1200
caccaaacga tgcaatctcc ggactgatgg aacgcttcaa cctgagcgaa attcaggcac    1260
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aattccgtgc tcaaaaccgc ggtggagtag gctcgaaggg tactgaaacc cgtgatgaag    1620
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tcaatgcaat tactatacgt gaagacgacc gagtaataga agtgcgtatg accaacggaa    1980
acaacgaaat catcatagcc aaccgtaacg gacgcgcaat acgtttccat gaagcagcag    2040
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aggatgaagt aataggcatg atttgcatta aggatctcga gacagagtcc gtaatggttg    2160
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gcggcaaagg tgtgaagacc atgaatatta ccgaaaaaac aggtaaactg gttacaatca    2280
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ttgaaaaacg taacgaccag atcggttctg tatgtaaagt tacatccgaa agcctggaag    2460
atgaagttcc ggaagaagaa agagaaggaa atattccaag cgatccggaa acgaatacac    2520
cggtaaatga aacagaagaa tag                                           2543
```

```
<210> 658
<211> 996
<212> DNA
<213> B.fragilis
```

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<400> 658
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gatgcacgag tatatgcgca tgcccctaaa agttacaaga attatctgct tcatgtaccg    180
tttggtctgc gtatcatcac tctaatattg attattttgg ttttggcacg tccccaaaca    240
acaaacagct ggcagaacag cgaaattgaa ggtattgata ttatgttggc tattgatgtg    300
tcgaccagta tgttggcaga agatttgaaa cccaacaggt tggaagctgc caaagatgtg    360
gctgcggaat tcatcaacgg tcgcccgaat gataacatag gaattacact gtttgccggt    420
gaaagttttta ctcagtgtcc tttgacagta gatcatgctg tattacttaa cttatttcag    480
gggatacagt gcgatattat tgaagatgga acagcagttg gtatgggaat tgccaatgca    540
gtaaccaggt tgaaagatag taaagcaaaa tcaaaagtga ttatttttgtt gacggatggt    600
accaataata aaggagatat ttctccattg accgctgctg aaattgcgaa gagttttggt    660
atacgtgttt atactattgg tgtgggaaca aacggtatgg ctccatatcc ggtacgggtt    720
ggtggtacaa cacagtatat taatactccg gtagagattg atgagaagac tcttactcaa    780
atagcaggta ctacggatgg gaactatttt cgtgctacca gtaattcgaa gctgaaagag    840
gtttatgaag agattgataa attggaaaaa acaaagttga atgtgaaaga gtacagtaaa    900
```

```
cgtcaggaag aatatcgttg gtttgcgtta gctgcattct tatgtatatt gcttgaggta    960
ctgttacgga actcaatatt gaagaagata ccataa                               996
```

<210> 659
<211> 870
<212> DNA
<213> B.fragilis

<400> 659
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atggaaacaa gtgaaattct aaaaaaagtt cgtcggattg aaataaagac gcgtggactg     60
tctaacaata tctttgcagg ccagtatcat tcagctttta aaggtagggg tatggctttt    120
tccgaggtgc gcgaatatca gtttggcgat gatatccgtg acattgactg gaatgtgaca    180
gcgcgtttca ataaaccttt tgtgaaggtg tttgaagaag aacgcgagtt gacggtaatg    240
ttgatggtag atgtttccgg cagtttggaa tttggcactg taaaacagct gaagaaggac    300
atggtgacag aaattgcagc cactcttgca ttttctgcta tccagaacaa tgataaaatc    360
ggagttattt tcttctcaga cagaatagaa aagtttattc ctcctaaaaa aggacgtaag    420
catattctat atatcattcg tgaattgatt gattttaagc ccgatagtcg tcggaccaac    480
atacgtcttg ctttggaata tttgacgaat gtaatgaaaa gacgttgtac cgcttttatt    540
ctgtctgact ttatcgatca ggaaaatttt aagaatgcaa tgaccatagc gaataggaaa    600
catgatgtag ttgccattca agtatatgac aggcgagttg ccgagttgcc ggcagtaggt    660
ctgatgcgga ttaaagatgc ggaaaccgga catgaacaat ggatcgacac atcttcggct    720
ggagtacgta gggcacatca tgaatggtgg gtgaataaac aaactgagtt agatgaaacg    780
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ttactgaatt tgtttgctaa acgaaattaa                                      870
```

<210> 660
<211> 1365
<212> DNA
<213> B.fragilis

<400> 660
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gaatgcatga aaagaaaaac tatagatatc ataacattag ggtgctcaaa gaacctggtg    120
gattcagaac agttgatgcg tcaattggaa gaagccggat atgatgtaac ccatgactcg    180
gaaaaaccga caggagagat agctgttatc aatacctgtg gttttatcgg tgatgcaaaa    240
gaagaatcga ttaatatgat tctggagttt gcacaagaaa aagaagaagg caatttggag    300
aaacttttg taatgggctg tctttcggaa cgttatttaa aggaattagc gattgagatt    360
cctcaggttg ataagttta tggaaaattc aattggaagg ggttgttaca ggatttgggt    420
aaagcttacc atgaggagct tcatattgag cgtactctta ccactcccaa acattatgct    480
tatctgaaaa tatcagaggg ttgtgatcgt aaatgctctt attgtgctat accgattatt    540
acaggaagac atgtatctcg tcctatagaa gaaatcttgg atgaggtgag atatttggtt    600
tccaatggtg taaaggagtt tcaggtaatt gctcaggaat taacttacta tggagtggat    660
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gaatggatac gtttacatta tgcatatccg gcacatttcc ctgaagagtt gttccgagtg    780
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aatatgctgc aacgtatgcg tcgtcatgtg acgaaaaagg agacttaccg gttgattgaa    900
caatttcgta aggaagttcc cgggattcat ttgcgtacga cgttgatggt gggacatcca    960
ggagagacag aagaggattt tgaggaattg aaagagtttg tacgtaaagt gcgctttgac   1020
aggatggggg ctttttactta ttcagaagaa gaaggaacat atgctgcggc taattatgaa   1080
gactctattc ctcaggagct aaaacaggca cgattggatg agttaatggc tattcagcaa   1140
ggaatttcta ctgaattaag tgcatcaaaa gttggacaaa aaatgaaagt cattattgat   1200
cgtatagaag gtgaatatta cattgggcgt acagagtttg attctccgga agtagatcct   1260
gaagtttta taaggtgtga aggggataat ttaatgattg gtaactttta tcaagtacaa   1320
gtgattgatt ccgatgaatt cgatcttttt ggtgaaataa tttaa                   1365
```

<210> 661
<211> 1248
<212> DNA
<213> B.fragilis

<400> 661
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ctttgtaaga gccctatgtt tgcggagata ataactattg gtgatgaact gttgatagga    60
caggtgactg ataccaattc ggcatggatg gggcgcgaat taaataaagt aggtatagag   120
gtaattcgtg tcgtgtctgt acgagatcgg gcagatgaga ttattgaagc tgtagatgct   180
tcgatgaaaa gggcaaatat tgtactagtg acagggggct tgggacccac caaagatgat   240
attaccaaac agactctttg caaatacttc ggtaccagac tgatctttag cgaggctgtc   300
tttgaaaacg taaaacgggg attggcggga aaaataccga tgaatgcgtt gaataaaagt   360
caggcaatgg tacctgaaga ttgcatcgtt attaataatc gggtagggag tgcttctgtc   420
agttggtttg agaaagatgg taaggtactt gtttctatgc cgggagttcc tcaggaaatg   480
accactgtga tgagtgaaga ggttattcca cgtttgtgtg caaagtttcg tacgggtgca   540
attattcatc gaacatttac tgtacaaaac tatcccgaat cggtgttggc tgagaaattg   600
gaatcttggg aaatggcatt acctgcttgt ctaaaactgg cttatttacc aaaaccgggt   660
ttgattcgtt taagattgac gggacgcggg cagaatcgta gcgagataga agcttgtgta   720
aatactgaga gtgccaaact tgaggcaatt ttaggagaag atattttgga tgaggaagat   780
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gcagaaagtt gtaccggtgg aagcattgca gcccgtatca cttcggttgc cggcagttcg   900
gaatatttta aaggaagcat agtagcgtat gccaatgaag taaagacgga gttgctgagt   960
gtatcgatgg aaacgcttga aaaaagaggt gcggtaagtg aggaaacggt cattgaaatg  1020
gtaaaaggtg cgatgaaagc gctaaaaact gactgtgctg tagctacgtc tggaatcgca  1080
ggtcccagtg gggggactga agagaagccc gttggtacgg tttggattgc tgctgcctat  1140
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agagcaagca ataatgccct tctattgctt cgaaaattgg tgaaatga              1248
```

<210> 662
<211> 1005
<212> DNA
<213> B.fragilis

<400> 662
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ttggtagagt cactgttaat cggactactt tctgatggac acgtgctgct tgaaggtgta   180
ccgggtttgg caaaaacttt ggccattaag acattggcct cgttgatcga tgcaaaatac   240
agccgcatac agtttacgcc tgacttattg ccagctgacg ttgtcggtac gatggtttac   300
agtcagaagg atgaaagttt ccaagtgaag aaaggtccga ttttttgctaa ttttgtattg   360
gctgatgaaa taaaccgtgc tcccgctaaa gttcaaagtg ctttgcttga agcaatgcag   420
gaacgtcaag taactattgg taaagaaaca ttcttgttac ctgaaccgtt ccttgttttg   480
gctactcaga acccgataga acaggaaggt acatatccgc ttccggaagc tcaggtagac   540
cgttttatgt taaaggtgat tattgattat ccgaaacagg aagaggagaa attaattatt   600
cgccaaaata tcaatggaga gaaatttaat gtgaagccta tcttgaaggc tgaagagatt   660
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atgattggat tcggtgggtc acctcgtgcc tctattaatt tagctttggc tgcacgtaca   840
tatgcgttta tcaaacgtcg tggctatgtg attccagaag atgtacgtgc tgttgcgcat   900
gatgtacttc gtcatcgtat cggattgaca tatgaagcgg aggctagcaa tgtgacttct   960
gatgaaattg tcagcaaaat attgaataag gtagaagtgc cttaa                1005
```

<210> 663
<211> 1257
<212> DNA
<213> B.fragilis

<400> 663
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aacagaagaa tagacataat attaataatt aatcaaacaa caatcatgaa aagagtatta    60
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gaagcgaaaa gcattgccgg agaagtaaaa cctgacttcg caaaagctga caactgatt   180
aacgaagcat taactaaccc tgaaacaaag gataatgcgg caacttggga cgtagcaggt   240
tatattcaga aaagaatcaa cgaaaaggag atggaaaatg cttatctgag aaaacctat   300
```

```
gatacattga aggtatacaa tagcgtactg aatatgtaca attattacgt taaatgtgac    360
gaactggcac agattcctaa tgaaaagggt aaaattaaaa acaaatacag aagcgccaac    420
tcaaaaacaa ttctggcaga acgtcctaac ttgattaacg gtggtattca atacttcaat    480
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aaagctaaag gtgatactgc taaatgggta gaaaaattgc aggaaggtat tgttaagttc    780
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gaaaaagcaa gagagctgaa acctgatcag aaagatttgt ggttacaagg tctttaccga   1200
gtatattaca acctgaatat gggaccggaa ttcgaagaaa tcgagaaaat gatgtaa      1257
```

```
<210> 664
<211> 303
<212> DNA
<213> B.fragilis
```

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<400> 664
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aatacaaaat atacttctga actgataaca tctctgctgt ctgatattac tcaggaattg   120
caggaaagca atgctatagg aatacaggga tttggtactt ttgaggtaaa aaagaaagca   180
gaacgtattg tcatcaatcc cgtcactaag ttgcgactgt tggttccacc caagttagta   240
ctggcgttta agccgagtcc tatattaaaa gataagttta aagaaacatt tccgtatgaa   300
tga                                                                  303
```

```
<210> 665
<211> 441
<212> DNA
<213> B.fragilis
```

```
<400> 665
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aagggaattc aggtgaatgt attgggagta ggcttacccg atggagctcc cattccgatt   120
gagggcagta acgactttcg tcgtgaccgt gaagggaatg taattgtgac tcgtctgaat   180
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tctaattctg ctcagaaagc tattaatcaa gagattaata aaatggctaa atcggatgtt   300
gaatctaagg tttatacaga ttacaatgaa cagttccaag tgattgcatg gatgatattg   360
ctcttgttat tggtggaaat gttgattctg accgcaaaa atccattgtt taagaacatc    420
aggttgtttt ctaataagta g                                             441
```

```
<210> 666
<211> 216
<212> DNA
<213> B.fragilis
```

```
<400> 666
agttttctat cttcaaaaca ggatgcaaaa atactaaaaa tgggtgaact gtgctcattc    60
tttatctata attttaagag aggtcatacc aaggttatat ataaatcagc cggtttatgg   120
atcgacaacc ggccggttta tggtttctct aaagacaaga gatcaccatt tcctgccctt   180
ctcttccaac gggaaccata catattagag aattaa                             216
```

```
<210> 667
<211> 1551
<212> DNA
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<213> B.fragilis

<400> 667
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gaaaaaaaga aaatacccgt cgcactgatg atagcggcag gaatgctctt atacaacaac   120
accgtcgcgg cgcagagcct ccctcccaca caggaaactt cgcaacatca gcttagcttt   180
aacgaggcgc tgcaactgct gcacaaaggc aaccaaagcc tgaagatagc cgacaaaggc   240
atcgacatag cccgtgccga acgtgggaag ctgaatgctt tctggatgcc cagcctgcaa   300
tcgaccggag catttgtaca cctttcggag aagatagaag tgaagcaacc gctttctcaa   360
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gagtccaccg gtatgataga taaagcggca cgcctctttg cccaagtcaa catggacgaa   780
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tatctgccca atatcgccct tttcggcaaa caaactcttt attcacatgg catacagagc  1080
aacctgttgc cccgcaccat gatcggggta ggcttcacct ggaacctttt cgacggactg  1140
gaacgggaga agcgaatccg gcaatcacgc ctgacacaac aaacccttgc actaggacag  1200
gagaaagcgc gtgacgacct gtccgtcggg gtagacaaac tatacaccgg cctgcaaaag  1260
gcactcgaca acgtgcgggc gctgaacacc accatcgaac tgagtgaaga actggtacgg  1320
atgcggaaaa aagccttcgc cgaaggaatg gtcacttcga cagaggtagt agacgcagaa  1380
accttacttt cgaaaacaaa agtagccaga ctggcggcct actacgaata tgacgtgacg  1440
ctgatgaatc tgctggcact gtgcggaata ccggaacagt cggaagcat gaaggacatc  1500
acctctcttc ccattacgga gaacagaaga aatgaaatag aaatcgaatg a           1551
```

<210> 668
<211> 201
<212> DNA
<213> B.fragilis

<400> 668
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aaaacacaac cgtctttcgg agtaaatgct tacttctttt ggtcgaaata tcggctcttc    60
gaagtgaaaa cacagactct tcccctтccc aagcccggtt ttctgggcaa agaagcagaa   120
agttccggga cattctcccc tatatgggta agaaaacaaa aagggatagt tagcagaaaa   180
tgccattacc tgtctttttg a                                             201
```

<210> 669
<211> 435
<212> DNA
<213> B.fragilis

<400> 669
```
tttctatata ctctgccaga ctttgtatgc tggctaccgg gagcatgggg atctggaatc    60
catttgtgcc attttctctc ttccggtacg ccattggaaa gattgcaatc ggtgttcgga   120
catatcaatg ggatgcctgc tttgtcaagt gcttccgaag caaagaaaat gtgtatgttt   180
ctgcgttgga tgattcgtag ggattctcct gtcgacctcg gtatttggcg gagtttcagt   240
ccctcagatc taattatccc tcttgacact catgtacatc gcatctcgac tgatcttgga   300
ttgaccaatg cacgtaaatg cctgaaaaca gcacgttgca ttactgatgc gttgcgggaa   360
atatggccgg atgatccggt aaagggagat tttgctcttt tcggatttgg tatcaacgaa   420
ccggtgaaaa gttag                                                    435
```

<210> 670
<211> 807
<212> DNA

<213> B.fragilis

<400> 670
```
caaggagggg caggcatggc taactggata accctcaaac aactgtcgga gaaacgcggt    60
attgccgaat ccgacctccg cacatgggca aacttgggat atatcacttc atcgaggata   120
gagaacgtcc taatgattga tgacgaaagc ctgacccaat atcttgatgt tcaccagacc   180
aaagatttag gtgagaacta tctggaaaag attatcaaag aaaaggaact ggaacgtgaa   240
gtactcctct cacaatgtga cgacgaacta tttctattga aaacccagaa actacaccaa   300
ccgctttttc atatcctcat tcaggaactc ggccagttga ttacagacga tcatgaacgg   360
gaaatattcc tttccgtctc cagtggcgaa cccatcgcac gggtggcgaa acgtaacaaa   420
atgacgtatg cacgagtggc gacttgctat agttccatcc tccggactct gggtgaacat   480
aagggacgaa tcgccacatt tcgcagtcgg acgatggaac tgatgttcga taaatgcaat   540
gcggtcacac ccgtaaatac tcccctatca aaccttgtcg gcgcgcatgc ctataatgtt   600
ttatatggag agatgggatt caggacagta cgcgaccttc tacaatacgc cacccagaac   660
ggatggcaaa gcctgagacg cttcaagggt atgggactgg ttacgtataa gagtgtgatg   720
aacgcactaa gggatgccaa cttcatcatt gtccgcaaag acggaaacat cgagctgtca   780
ccagagatcg ctgcactggt aatataa                                        807
```

<210> 671
<211> 1242
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (1135)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 671
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gagaaaagat attctcagtg ggactctgtg ctactctgtg gtaaatcaaa actcaaagac    60
aatctaatta tgcaacactc ccctataacc cgtgtcatac aatgtgagtg gcaacggatg   120
acctctcgac gcctctactt cggtgtctgc ctggtacttc cgttgttcac gctctttttc   180
atggctacca tattcggcaa cgggcagatg gaaaatatcc ccatcggcat tgtcgaccgg   240
gacaacacgg ccacttcgag agatattacc cggcggatgt ctgccgtacc caccttccgg   300
gtaacccgcc acttcgttga cgaagccgag gcacgcaaag cggtacagca gaaagaaata   360
tatggttatc tctcgatccc tccccgcttt gaacaagata tgatatcggg gcaggacgcc   420
actctgaact attattatca ctatgccctg ctctcggtag gaggtgagtt gatggccgcc   480
ttcgaaagct cgctcgcacc cgtagctctc tcccccatcg tgatgaaagc tgtggcgctg   540
ggagtgaacg aacagcagat agaaaccttt ctactccccg tgcaagccaa caatcatccc   600
atttataacc cgtcgctgga ttactcggtc tacctgagcc agcctttctt ttttgtactc   660
tttcaggtgt tggtactgct tatcacggta tatgccgtag gaagcgaaat aaagttcggt   720
acagccggtc aatggttgca ggcggcgggc ggcgacatca cggttgccgt tacgggcaag   780
ctgttgcctt atacgcttat cttcagcctg atcggtatat tgggcaactt tgtcatgttt   840
ggcatcctgc atataccttt tcaagggagt tggctgctgc tcaacgtcat gacagtgctc   900
tttatcattt ccactcaggc actggcattg ttcatcttct ccctgttccc tgccgtggca   960
atcatcatca gtatcgtatc catggtcggc tcgctgggag ctactttatc cggtgtcacc  1020
tttccggtac tcaacatgta tccgttggtg cgcgacgcct cttatctgtt tccggtgcgc  1080
cattacaccg aaaattacaca aaccatgctc tactatggcg gcggatttat ccacntatgg  1140
ccttcggcag tgatactctg tatcttcccg ttattggcgt tggcgatgct tccgcacctc  1200
agacgagcca taatcagtcg taaatatgaa aacatccggt aa                      1242
```

<210> 672
<211> 753
<212> DNA
<213> B.fragilis

<400> 672
```
ataaagaatc tatattttat ggagattttc tggaaaacta ttgcgtatta taattctgct    60
acatggatct atcagttact gatcattgtc gccggcctgc tgttgacagt gatgcttata   120
```

```
aagaatcccc gtccgtgggt aaagatgggc atgaagctat atatgatttt tctgtatttg      180
tggattgcta tcgcatatta tgccatctgt tgtgacgagc gcagttataa cggggcgctg      240
gctatgttct gggtggttat ggccacgata tgggtatggg atgccatcac cggatatact      300
actttcgaac gtacatataa atatgatatc ctttcgtacg tattgttgat tttaccattt      360
gtatatcctt tggtatccat tgcgagagga cttacttttc caggcattac atcgccggta      420
atgccttgct cggtaacagt tttcacgatc ggtctgcttt tgttgttctc ccgtaaggta      480
aatatgtttt tggtgctgtt cctgtgccat tggtcgctga tcggcttatc gaagacttac      540
ttctttaata ttccggagga tttccttttg gccagtgcaa cgatccctgc cctatatctc      600
tttttccggg agtatttcct caacaacctg catgccgata caaagcctaa agcaaagtac      660
attaattggt tgcttgtctt tgtatgcgta tctatcggaa tcttacttac caccaccctg      720
tttctggagt tgatgccggg caaacagccg tag                                  753
```

```
<210> 673
<211> 1503
<212> DNA
<213> B.fragilis

<400> 673
cgtgacgaac acgatatgaa taagaactta caccctttga tgctggccgg aaccggtagc      60
gatgtaggca aaagcatcat tgccgcagct ttctgccgta tatttctgca agacggttat      120
catccggcac cattcaaagc acaaaacatg gcattgaact cttatgccac tcccgaagga      180
cttgaaatag gaagggcgca agccgtgcag gccgaggccg caggtgtgcc ttgccatacg      240
gatatgaacc cgttgcttct gaaaccatcg tccgatcata cttcacaggt ggtgctcaac      300
ggacgtccca tcggcaatcg gaatgcttac gaatatttcc gccgtgaagg gcgggaggaa      360
ttgcgaaaag aggttcatgc cgcattcgac cgtttggctg cccgatataa tccggtagtg      420
atggagggag cggggagtat ctccgagatc aatcttcgtg acagcgatct ggtgaatctg      480
cccatggcca tgcatgccgg ggcagatgtg attctcgtgg ccgatataga ccgtggagga      540
gtgtttgcca gtgtttacgg ttcggtgatg ctgcttcggc cggaagagcg gaagcatatc      600
aaggggatat tgattaataa attccgtgga gatatccgcc ttttcgagtc gggggtaaag      660
atgctggaag atctttgtgg tgttccggtg gttggggtgg tgccctacta taaagatatc      720
tatattgagg aagaagactc ggtgatgctt cagaccaaga atatccgtgc cggacaaggc      780
aaagtgaatg tggctgtcgt gttgcttcgt catttaagca atttcaccga cttcaatgtc      840
ttggagcgcg atccgcgtgt acacttgttc tacaccaaca atacggacga gttgatgaaa      900
gcggatatca tcctgttgcc cggttcgaaa agcactttgt ccgatctgta tgagttgcgc      960
cgcaacggag tggcgcaggc catcgtccgt gcccaccgcg aaggtgccac ggtaatgggc      1020
atttgtggag gttaccaact gatgggtagg gaggtttgcg atcccgatca tgtggaaggc      1080
gagatagaac gcttgccggg attggggtta ctgcctgtca gcacccgcat gcagggagag      1140
aaggttaccc gccaggtacg gttctgtttt cttgaagaca gcgctgtctg cgaaggatac      1200
gaaatacaca tgggaacgac cacgcccctt gcggatgttc ctgtttctcc actcaaccat      1260
ctggcggacg gaagggagga tgggtatttt gtagaccgca cctgcatggg aacatacgta      1320
catggcattc tcgacaatcc ttcagttatc gattacctgc tggagccttt cgccgataaa      1380
ctgaaagaga cggctttttga ttacaaagca tttaaagaag aacaatacga taaactggca      1440
gcccatgtcc gtaagcacgt cgacttgccg cttatctatc aaatattgac agacaatgat      1500
tga                                                                    1503
```

```
<210> 674
<211> 1203
<212> DNA
<213> B.fragilis

<400> 674
tcagtcgtaa atatgaaaac atccggtaaa ctttcgcaga tttcctttat catcgcacgt      60
gagtttcgtg ccatcagcac cagctatgcc gtactgttgg tactgatggg aggtatcttt      120
gtttatgggt tgctctataa ctatatgtat gctcccaata tcgtgaccga cgctccggtg      180
gcagtggtcg acaactcgca cagcagcctt agccggcaat acatccgttg gctcgacgcc      240
acgccgcaag tagccgtata cgcacaagcc atggactatc gggaagcccg cgaatggatg      300
aaagagggca aggtacaagg cattctgtac attccgcatg attttgagac ccgtgtcttc      360
cagggacgcg aggctgtatt ctcactatac gccaccacag acgcctttct ctattttgaa      420
gcgctgcaag aagccacttc acgtgtatac cttgccatca acgatgccca tcgcatggac      480
```

```
ggtgccgtat tcctcccccc gcagggactg cttgccgtgg ccatggccaa gcccgtaaac      540
gtgaccggca ccgcactcta taaccacacc gaggggtatg gttcttatct gattccggct      600
gtcatgatgg tcattatctt ccagacctta ttgatggtta tcggtatgct gacgggtgac      660
gagtatcagc accgcgctac agaaccgttg cttccggggg gcaggacagt agataaaagc      720
ggactctggg gaggggcaat gcgtcttgtt gccggaaaga ctttttgtgta ctgcggactt      780
tatacggtct tctccatgtt cttgttagga ttattacccc acttcttcag cattcccaat      840
atcggaaacg gactgtacat taccgctatg atggtacctt atctgatggc gacctctttc      900
ttcgggctgg cagcctcgcg ttacttcacc gattcggaag ctccgctgct gatgatcgct      960
ttcttctcgg taggcttgat tttcctgtcc ggagtctcct acccgctgga actgatgcca     1020
tggtattggc gcatggcaca ttacatcctc ccggccgcac ccgccacgct tgctttcgtc     1080
aagctaaact cgatgggagc cgatatggca gacatacagc cggaatacat tacactgtgg     1140
atacaggtga tcgtctattt cgggctcagc gtgtgggtat acaagaaaaa gctggaagcg     1200
tga                                                                   1203
```

```
<210> 675
<211> 966
<212> DNA
<213> B.fragilis
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```
<400> 675
ccaagcccaa aggctctctg ggaacacttg aagaactggc cttgcagatc gggcttatcc       60
cagcaaacac ttactcccga gctgagacat cctcaaaata tcatattcgc agccgatcat      120
ggcattgtcg acgaggggagt cagcctctct cccaaagaga tcacctggca acaaatcagc      180
aattttcttc acggaggggc aggtgtcaac ttcctttgcc gccagcacgg attcgagttg      240
aagattgtag atgccggagt ggattacgac ctcccatacg agaaaggaat catcaacatg      300
aaggtacgca aaagctcgcg taactatctg tacgaggcag ccatgacaga agaagaaatg      360
aatttgtgca tcgagcgcgg agcggaagta gtccgtcagt gtcatgccga agggtgcaat      420
gtgctttctt tgggcgaaat gggtatcggc aacacttctt cgtcttccat gtggatgacg      480
tgcttcaccc atattcctct cgaactgtgt gtcggagcag gcagcggact cgacaatgca      540
ggcgtccgtc ataaatataa tgtattgcag caggcactgg accattatca gggagacgga      600
agcgcacacg acctgatccg ctatttcggc ggactggaaa tggtaatggc aataggcgcc      660
atgcttcagg cagccgagtt aaagatgatt atcctggtag acggattcat catgacaaac      720
tgcatccttg cagcctccca actttaccct gaggtattgc attatgccat cttcggtcat      780
cagggagatg aatccggaca taagctggta cttgatgcca tgggagccaa gccattactg      840
aatctgggtt tacgtctcgg agaaggaacc ggcgccatct gctcctatcc tatcattgac      900
tctgccatac ggatgatcaa cgagatggac aactttgcac atgcagccat caccaaatat      960
ttctaa                                                                966
```

```
<210> 676
<211> 621
<212> DNA
<213> B.fragilis
```

```
<400> 676
agccatgcaa agataaatat tgtttccgaa atacccatag caatggcaca atattttgca       60
tccgggaatg gaaatataaa atattaccgt acatttgcta accaaaaata cacagataga      120
ttcatgaaac agatcatact catcaccgga ggagctcgtt cgggcaaaag cagctatgcc      180
gaacgcctgg cgttatccct ctctcctaat ccggtttact tggccacctc acgtatctgg      240
gacgaagaat tcgtcaaag ggtattgcgc catcaagcca accgcggacc ggaatggacc      300
aatatagagg aagaaaaaga attgagccgc cactctttgg aagggcgtgt agtgctgatc      360
gattgtgtaa ccctctggtg caccaattat ttctttgatc tcgaagcaga caccgacaag      420
gcactgactg ctgttaaagc cgagtttgac cgactgacac aacaggacgc gacccttatt      480
tttgtcacca acgaaatcgg tatgggagga acttcagaaa acctgataca acgaaagttc      540
actgacatgc aaggatggat gacccagtat atagcctccc gggccaatcg ggtaatacta      600
atggaacggg gattcctgtg a                                               621
```

```
<210> 677
<211> 1509
<212> DNA
```

<213> B.fragilis

<400> 677
aagaagaaaa atataatggc aaaagaactg aaagacctga ccaaacgcag cgaaaactat   60
tcgcagtggt acaatgattt ggtggtgaaa gccgatttgg cagaacaatc ggctgtgcgt   120
ggatgtatgg tgattaagcc ttacggatac gctatttggg agaaaatgca gcgtcagctg   180
gacgacatgt ttaaagaaac cggacacgtt aatgcttatt tcccgttgct gattccgaaa   240
tcatttctga gtcgtgaagc tgaacacgta gaaggctttg ccaaggagtg tgccgtagta   300
acacattatc gcctgaaaaa tgccgaagat ggttcgggtg tggtggtcga tcctgctgca   360
aaattggaag aagagttgat tattcgtccg acttctgaaa caatcatttg gaatacttat   420
aaaaactgga tccagtcata tcgtgatctg cctattttat gtaatcagtg gctaacgtt   480
ttccgttggg aaatgcgtac gcgattattc ctccggactg cggaattctt gtggcaggaa   540
ggtcatacag cacacgcaac gcgcgaagag gcggaagaag aggctatccg tatgttgaat   600
gtatacgccg agtttgcaga gaagtatatg gcagttccgg tagttaaagg tgtgaaatcg   660
gctaatgagc gctttgccgg tgcacttgac acgtatacca tcgaggcaat gatgcaggat   720
ggtaaggcat tgcagagtgg tacttcacac ttcttgggac agaatttcgc aaaagcattc   780
gatgttcagt ttgtaaataa agagaacaag cttgaatatg tatgggctac ctcttggggt   840
gtttctaccc gtctgatggg ggcactgatc atgactcact cggatgataa cggtctggta   900
cttcctccgc atctggctcc gatccaagta gtgatcgttc ctatctataa gaatgacgag   960
cagttgaagc tgattgatgc taaggtagaa ggtattgtgg caagattgaa gcaattgggc 1020
atttcagtga aatatgataa tgctgacaat aaacgtccgg gctttaaatt tgccgattat 1080
gaattgaagg gtgtgcctgt ccgtctggtg atgggtggac gtgacttgga gaacaatacg 1140
atggaggtaa tgcgtcgtga tactctggaa aaagagactg tgacttgcga tggaattgag 1200
acgtatgttc agaatctgct ggaagagatc caagctaaca tctataagaa agcgcgtact 1260
tatcgtgact cacgtatcac tacggtggat agctatgatg agtttaagga gaaaatcgaa 1320
gaaggcggct ttatcctggc tcactgggat ggaacagtgg agacggagga aaagatcaaa 1380
gaggagacaa aggcgacgat tcgttgcatt ccgttcgaat cgtttgttga aggtgacaaa 1440
gagccgggta agtgtatggt gacaggaaaa ccgtctgctt gccgtgtgat atttgctcgt 1500
tcttattaa   1509

<210> 678
<211> 507
<212> DNA
<213> B.fragilis

<400> 678
gtctatatga aacaagaact aaaggaaaag cttttgcttt tagcggataa atatgaggtg   60
aaagaattta ttatggacga tccgatacag tttccccatc ggtatactga taaagctgat   120
attgagatct ccggactgat cgctttctgg atcgctaccg gtaatagaaa ggccattatc   180
aaaagtggtg accggattga tcacgagctt ttcctgaatg ctccatatcg atatatatta   240
agtgaagaat ggaggaaata tcggggggagt aacatccagt tttttatcgc tattactcct   300
ggaatgattt ctatatactc tgccagactt tgtatgctgg ctaccgggag catggggatc   360
tggaatccat ttgtgccatt ttctctcttc cggtacgcca ttggaaagat tgcaatcggt   420
gttcggacat atcaatggga tgcctgcttt gtcaagtgct tccgaagcaa agaaaatgtg   480
tatgtttctg cgttggatga ttcgtag   507

<210> 679
<211> 345
<212> DNA
<213> B.fragilis

<400> 679
tctgtggtga agttcattat aacatattcg tttgtcaaat tggtacctta taaaatgttt   60
tctggatcaa aaagacaggt aatggcattt tctgctaact atcccttttt gttttcttac   120
ccatataggg gagaatgtcc cggaactttc tgcttctttg cccagaaaac cgggcttggg   180
aaggggaaga gtctgtgttt tcacttcgaa gagccgatat ttcgaccaaa agaagtaagc   240
atttactccg aaagacggtt gtgttttttca aaaatgaata agagttttgc ccaatatctc   300
tatatgtttt cttccattac atatattgtt cttatttggg agtga   345

<210> 680
<211> 1002
<212> DNA
<213> B.fragilis

<400> 680

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gagatggaga attcagaatc taaaaaaggc agaaccttaa gtatcgcatt catcgttgta    60
cttgtggcag tagcactctt caccgtcatc ggaatgattg ccatgcgcca ccagcctctc   120
gtcttgcaag ggcaggccga agctaccgag attcgcatca gcggcaaact gccgggacgc   180
atcgacacct tcctggttga agaaggccag tgggtgaaac aaggagatac gctggtagtc   240
atcaacagtc cgactgtaga ggccaagtat cgccaggtgg acgcattgaa acaagtagcc   300
gtagaacaga acaagaagat tgacgccgga acccgcaagc agatcatagc tacggcgcag   360
caattatgga acaaaactca aagcgacctg acattggcac ggacaacgta caaccgtatt   420
ctcactttat ataaggacag tgtagtcact tctcaacgta aagatgaagt ggaagccatg   480
tacaaagccg cacaagcggc cgaacgggct gcttacgagc aatatcaaat ggctgtagac   540
ggagcacaaa gtgaagataa agcctcggcc cgctcgatgg tcaatgcggc caacagcacg   600
gttgatgaag tttcatcact cctggtggat gcccgcctga tcgcaccgga agatggacaa   660
atagcaacca tctttcctaa acggggcgaa cttgtcgcac cgggcactcc gatcatgaac   720
ctggtggtga tggatgatat acacgtggta ctgaacgtaa gggaagacct gatgccggac   780
ttccgtatgg gaggtacatt cattggggat gtgcccgccc tggcccaaaa aggaatcggg   840
ttcaagatat attatatcag tccgctgggt agttttgcta cctggaagtc gaccaagcaa   900
acgggcagct atgatttaca gacattcgaa atccatgctc gtcccaccaa gaaagtggag   960
gggctgcgtc cgggaatgtc ggtactggta gaaatcaaat ag                     1002
```

<210> 681
<211> 411
<212> DNA
<213> B.fragilis

<400> 681

```
gaaccggaga aagcaagtca agaccggccg aagaactact tgcagaactt atcagagaaa    60
gggaaggtaa tgattgaaat acataccatc gtaacctttg ataaagaaat gaaacggctt   120
agtaagaagt atcattcaat aattaaagat tacgcagctc tgatagaaga tttaaaaaag   180
aatccgcata taggggtaga cctgggaaac ggcatacgaa aagtacgaat ggctatagcc   240
agtaaaggga aaggaaagag cggaggcgca cgggtcatca ccgatacatc agccattatc   300
agcgtagaag aaggcagagt taccctactt accatttatg acaaatccga ccgggaaaat   360
atctccgaca atgagataat aagacttcaa caagaaattc tgaagaagta a            411
```

<210> 682
<211> 498
<212> DNA
<213> B.fragilis

<400> 682

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aaacagtttg atatgatagc tttagatatt ctttccgatg gatttttgc cgcaatagcg     60
ggtattggtt ttggagccat atccgatcct ccgttgcggg ctttcaagat gattgcgata   120
cttgcggcag ccggacatgc ctgccgttat tgcctgatga ctttcctggg tgtcgacatt   180
gccacggctt ctttgttcgg ggcattggtt atcggctttg cagtttgtg gctcgggcgg    240
aaggtgtatt gtccgatgac tgtgctttat ataccggcat tgctcccgat gattccgggt   300
aagtttgcct acaatatggt gttctcgttg attatgagtc tgcaaacaat gaacgaaccg   360
gagcgtctgg gcaaatacat ggagacgttt ttctctaatg gcctggttac ctgtaccgtt   420
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```

<210> 683
<211> 840
<212> DNA
<213> B.fragilis

<400> 683

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tattcggccc atttgatggg agcaggtgtg catacctccc gtgtgatccg taattcaaag   180
cgcatcggag aagcctatgg agtggatgtg aagttgagtg tgtttcacaa aaacatcatt   240
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catccgatca gttttgaaca taactcagag ttgagtgcct tgagctggga ggtttacgac   360
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<210> 684
<211> 1743
<212> DNA
<213> B.fragilis

<400> 684

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gtgcttatcc tgtcgctggt cattgcgttt ggcattatgc tgggtaaaat aaaagtagca   180
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accctcaata tgttggctat gatcgttgtc tttgcaggag tcatcattac ccttgcattg   420
cattttataa ccggaatacc gattaccacc atggtaggta ttttatcggg agcggtgacc   480
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tcgctgttag gccttaaata cctttttccgt attaatacca agcaggagga agccgaagcc   660
gaacagggac tgggacattt acaagagttg acagtccgtc ctgtttcatt ggaggtccgt   720
aatgaagctc ttcacggtaa acgtattaag gatatacgtc cattggtaaa ccgtaatttt   780
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aagctgaact attatacgtt gataggggtg ttggccggtt ccacaacgaa tccaccggcg  1620
ttggcctact ccaatgatct gacatcgtgt gatgcgccgg cagtaggtta tgctacagtc  1680
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tga                                                                1743
```

<210> 685
<211> 576
<212> DNA
<213> B.fragilis

<400> 685

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gcagtgatcg gcattatccg ttcattgctc cctcaggagc atgactggca gaagttgctg   180
caccacctcc aaagagagtt aatggtagtt atgagtcatg tggctactcc atccgccatt   240
cgcgataaga atccgaatgt gctgtcgccc ggactggcgg ctttctgtga gcaagagatg   300
gatacaatga ctgccggact gaaagagaac ggttatttcc tgttgcccgg tggcacacct   360
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gatctgtttt ttgtaatggc acgcttcgac atgcaacaac aggactggcc ggaggaacgc   540
tggcaggcct tcgcatataa gacaaagaag aaataa                             576
```

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<210> 686
<211> 783
<212> DNA
<213> B.fragilis
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<400> 686
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ttgcacactg atgaaacgga agttgcaagg ttataccggc gactgttgcg gagcactgtt   180
tcttctaagc gaactgtctt tctacctggg aatagttata ctaatgttta tatagtcatg   240
gaagtcatat taatccgcca tacctctgtc gatgttccta aaggagtctg ttatggccag   300
actgatgtac ctttgcgaga tagtttttgaa gaagaagcct caattacggc tcaacaacta   360
cagaacgacg tatttgatgc cgtattcaca agcccgctga gtcgttgcac ccgcctggca   420
gaccactgcg gttatccgga tgccattcgt gatgcccggc tgaaagagct gaacttcggt   480
gaatgggaga tgcaggagtt tgataaaata tgtgatccgc gactggagga gtggtataac   540
gactacttcc atgtagcggc tacaggcgga gagtctttta tgatgcagct tcaacgggta   600
tcggagttcc tgaatgaagt gagtggaaaa gagtataaac gcatagccgt ctttgcacat   660
ggaggggtgc tgatttgtgc acaaatctat gcagggatac tgagaatgga agacgctttt   720
aacgcactga caccttacgg cggagtggtc cggctgcaac ttaactcaaa gacagaagaa   780
tag                                                                 783
```

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<210> 687
<211> 978
<212> DNA
<213> B.fragilis
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<220>
<221> unsure
<222> (704)
<223> Identity of nucleotide sequences at the above locations are unknown.
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<400> 687
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ccgcatcctg tggtaggatt cggtaaactg atagcttggg gagagaagtg tctgaatgcg   180
gggagagccc gcgtttggaa aggggggaatg atgtcggtag cattgattgt gggagtctac   240
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atacaaacac tgctgatctt ttgttgcctg gcaggtacaa ccctgatacg tgaggtccgg   360
atggtcttcg aagccgtaga ccgttcattg gacgaggggc gtaaacaagt ggcccgcatt   420
gtgggacggg atacctctgc actatctgca caagaggtgc gtaccgcagc tttggagact   480
ttagccgaaa atctgagtga tggggtaatt gcaccacttt tttggtatgc agtgttggga   540
gtgcccggca tgatggcgta caagatggtg aatacacttg actctatgat cggttaccgc   600
aacgagcgtt accgtcaatt cggctgtata gctgcccgga tcgatgatgt tgccaattat   660
attcttgccc gcctgacggc tttgttgatg atcctcgtca ccgnacggtt ttctttgctc   720
aggttcgtgg gtaaatatgg cagccggcac gccagcccaa actccggtat ccccgaagct   780
gctttggccg gtattctgaa ttgccgtttc ggcgggcccc actattattt cggcgaagag   840
gtgtggaagc cttttatagg caacaacgaa cgagcattga caaccgagga tatgaagaaa   900
gccgtctgtg tcaatcggca ggcagaggta ctgatggttg tgttggtgtg gctgactatt   960
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cttctgtctt tgagttaa   978

<210> 688
<211> 399
<212> DNA
<213> B.fragilis

<400> 688
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atggcttatc tcgaattaga agcagaaaaa gcagaactga tccggactat tgccaacata   180
gacagtaaag aaatcatcga taaagtgaaa cagaaacttc acgatgtact cggtttggac   240
aaaaacaggg aaaccgaacc ggagtgtaaa aaatatattc tcgcaaatat aaaagaagcc   300
ttctgcgaac aagaaagagt aagaaccgga gaaagcaagt caagaccggc cgaagaacta   360
cttgcagaac ttatcagaga aagggaaggt aatgattga   399

<210> 689
<211> 3255
<212> DNA
<213> B.fragilis

<400> 689
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aacggaaatg agatcgtatt ttcgtatgcg ggcgatttgt ataaagtgcc tgcttcggga   180
ggtgaagcac aacgcctgac ttcccatgtg ggatacgaaa tgtttccccg gttttctccg   240
gacggcaaaa cgattgcatt caccgggcag tacgatggaa atacagaagt gtataccatg   300
cctgcaacgg gtggcgaacc actacggata acctacacgg ctaccaatag ccgtgacgac   360
ttgggtgacc gtatgggacc taacaacatt gttatgacat ggactccgga cggacaacgt   420
atcgtgtatc gtaatcgcat cagcgacgga ttctccggta aactctttac tgtagacaaa   480
gaaggcggat tgtcagaagt cattcctctt cccgagggag gcttttgcag ctattcaccg   540
gacggaaaac aattggcata caaccgggtg atgcgcgaat tcgtacctg gaagtattat   600
aaaggcggta tggccgatga catctgggtg tataatccgg gaaacaaaac agtggagaat   660
gttaccaata atgtagctca ggacattttt ccgatgtgga ttggcgatga aatctttttc   720
ctttccgacc gtgaccgtat catgaatatc ttcgcataca atacgaagac caaacagact   780
gtaaaggtga cgaacttcac tgagtatgat gtgaaattcc caagcgtcca tggcaatacc   840
atcgtttttg aaaacggcgg atatatttat aagatggatg ctgcggcccg gaaagctgaa   900
aaggtaaaca ttacactggc ttctgataat atctatgccc gcaccgattt gaaagaggga   960
gcgaattatg tgactgcggc cagcctttca ccggatggag cacggatggt agtgacaagc   1020
cggggtgaag tattcaatct gccggtagag aaaggggtta caaaaaatat aactcgttcg   1080
ccgggagctc acgatcgtga tgcacagtgg tcaccggacg aacacagat tgcttatatc   1140
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cagtttactc ataagaacga tacatatatc cgtgacttta atggagtcc ggattctaag   1260
aagatagtgt atatggatcg taagaaccga gttaatctgc tggatgtggc ttccgggaaa   1320
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acgaaaatgt atgacttggc aagtcagaaa gaggaatcga ttgccgatgg agcttcgatg   1920
gatgttactt acgatggtaa gaaggcactt ttctttaaag gccgtcagat ttatgtgacc   1980
aatcttcctt cgggtaagac agaactgacc gctccggtcg atttaagcaa tatgaagatt   2040
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gacggattct atcaggagag catgcacggt gtagattgga aagcaattaa agaaaaatat   2160
gcggtcttgc tgccttacgt taaaactcgt ttagacctga attacattat cggtgagatg   2220

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```

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<210> 690
<211> 1347
<212> DNA
<213> B.fragilis

<400> 690
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aaggttcaac ctttcaaatg cggtcccgac tatatcgaca ccaaatatca tacggcagtt        180
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tatgacggtt acgaccgtga ccggggttcc tcggcagaag tggccggatt actgaattta        360
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agccattcga aaggaacgga cgcactggaa gagctgaccg gattaatgga aaagtacatc        660
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ccgttctttta tctcgaatcg taaggctgac aggcgcttga ctctgggta ccggcagttc        1140
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ccggaagagt cactggaatc agtcactcag gtatacaatg ccaagagaat gcctgtcagt        1260
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<210> 691
<211> 2466
<212> DNA
<213> B.fragilis

<400> 691
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acaggaaagt gttttatttc ggaaaccctg cttaaatcat tggaagtcag tagtgtatgg        180
ttagacattg acgagttgat gtctaccgta cgacaggatt atcgtaagcg cattacggat        240
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gagtttacct ccatacctcg gaaggggggtg ttcgaacaga cctttcctgt gacttccggt        300
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gggcttcccc tgtgcaaaag cattatcgag aagatgggcg gacacattgg cgtaatctcc       2400
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cgctga                                                                   2466
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<210> 692
<211> 870
<212> DNA
<213> B.fragilis

<400> 692

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aatttcagtt ccaacgtata taataaggtg aacctcgacg gactgcgtgc acatttgtgc        120
gggcgcatct ctgccatatc cgcttatccc gaaccggaac cttatacgct ggaggcccgt        180
ctggcggacc gccacgctct gcctgccgct tcggtttgcg tgacgaatgg tgctacggaa        240
gccatttatc tgatagcgca gacctttcgg ggaacgaaca cggccattct gatgcctacg        300
tttagtgagt atgccgatgc ctgccgcatg catgggcaca aggtcacatc gctgtacaca        360
ctcgatgcag tgccggagga cgtgcatatg gtctggcttt gcaatccgaa caacccgacc        420
ggagaggtgc gtgataagaa gtatctgacg gaactgattg caaagcatcc ccgggtctgt        480
ttcgtgatcg atcagtcata cgagtatttc acgctgaaag agcttttttac ggcgcaggaa        540
gctgccggat ttcccaatgt gatccttcta cattcgatga ccaaacgcta tgccattccg        600
ggacttcggt tggggtatgt cactgcgcat cccggactga tagggcgtct gcgtacgaac        660
cggatgccct ggtcggtcaa tcagcttgcc atcgaagcag gactctacct gctttccgaa        720
ggcatcccgg ccggtctctc catgaaagat tatctggcgg aatgtgcccg cctgaaaagt        780
tcgcttgagg cgataggcgg gttagaggtc tggcctaccg atactcactt tatgctggtg        840
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```
tgcctgcgtt tcggaaaagc tgcgctttaa                                    870
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<210> 693
<211> 312
<212> DNA
<213> B.fragilis

<400> 693
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gcttctccga tgcgctttga attacggatc acacgggagg tatgcacacc tgctcccatc   60
aaatgggccg aatatccggc aatgaacttg gatatggaaa tcaaagattc atttgtagtc  120
ataaaattgc tcactttttt aaatcgggcg caaaagtaca aaaaagaaag gaaagagaaa  180
gcacataagt catttcattt caccagactc tccttgtcac attgcttatc tttattatta  240
tttagaactc aacctaacga aagaattaat aattgtgccg taagcacacg caggaacatc  300
gtcagcggat ag                                                      312
```

<210> 694
<211> 753
<212> DNA
<213> B.fragilis

<400> 694
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atccgcgaag ttccagcaga atgtttaaa cacgttgtgc cttactggcc tttgtccgga   120
tggctcacgg gcggcatcat ggcaggagta ctttggttga gcgcacagat cctccccttc  180
tccgttgccg tattgttggc acttgccgcc cggttattga tcaccggtgc cctacacgaa  240
gacgggttgg cagatttctt cgatggattc ggaggaggta cgaaccggga gcggattctc  300
tccatcatga aagattcgca tatcggcagc tacggtgtca tcgggttgat tttctacttc  360
cttcttctat ggagtctttt gatgtcgctc ccctctcct tcgcatgtat tacattgatt   420
gcaggcgaca cgataagcaa gctgacctca tcacaaatca tcaacttcct gccttacgca  480
cgaaaagaag aagaaagcaa ggccaaagta gtatataaca gaatgtcagg cggagaatgt  540
gctttcggtc tgttatgcgg tatacttcct tcagcactcc tgctaccgta ccgatactgg  600
atggctatcg tatttccgct gatcatgctg tatctgcttt gcacactgat gaaacggaag  660
ttgcaaggtt ataccggcga ctgttgcgga gcactgtttc ttctaagcga actgtctttc  720
tacctgggaa tagttatact aatgtttata tag                               753
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<210> 695
<211> 201
<212> DNA
<213> B.fragilis

<400> 695
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tattttatat ttccattccc ggatgcaaaa tattgtgcca ttgctatggg tatttcggaa   60
acaatattta tctttgcatg gctttacaaa ataaaagcaa cacatgcggt agtagctcag  120
ttggcagagc ggcggcttcc caagccgcag gtcacgagtt cgaccctcgc ctaccgctca  180
aaagtttatc tcctcaacta a                                            201
```

<210> 696
<211> 531
<212> DNA
<213> B.fragilis

<400> 696
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cttaagagtt caaccaacag attttcctat ataatcatct tctcaatagg caacaccaaa   60
ataccttccg ctcccagcgc tttcagctta cctatgatct cccaaaaccg tttctcatcg  120
agcactgtat gtacagagca ccaaccatct tgtgccaacg gcatcacagt aggactcttc  180
atacccggta gcacagcaat aatatcttcc agtttatctt taggagcatt catcagtacg  240
tacttttat cttcagcagt tttcacagca tccatgcgga aaagcaattc gtccaatatc   300
tctttttct ccttactcat attcttgttg cctatcagca aagcttctga tctcattacg   360
acctccactt ctttcaggcg attgctgact agagtagaac cggaactgac aatatcgaaa  420
```

```
atagcatccg ccaatccgat gccgggagca acttctacag aaccggtaat gacatgcact    480
tcagccttca ccccgttact tttcataaaa gcatctaaaa ttccgggata g             531
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<210> 697
<211> 312
<212> DNA
<213> B.fragilis

<400> 697

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ctgagttctc cgattatatt ggtaatggtg aatgtaatca ggagaatgaa ggcaaataca    60
agtattattg agaaagaaag tatccggttt ttaataaatt taagccagct ctttttaggg   120
acggctttta ttccccaaat tgaatttaat gaactttgta tttctgcaaa aatagtggtg   180
gcaccaaaaa tagagatacc taagctgaca aaggcggccg acctggagga gtctgtattt   240
tctgcatttt ctataataga acgaagggcc tcggtaactt cggggcccac aatcggttgt   300
agttggacat aa                                                       312
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<210> 698
<211> 195
<212> DNA
<213> B.fragilis

<400> 698

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ttgaggctgt tgtcgatcag gttcagcagc gctgacacgt gccttgttgc tttgttatcg    60
gcagcatatg tagtgacaga gtataaggtt actgctatta ctataagcgc tatattgaaa   120
gaccttccca cagtaaatgt tgttttcccg atgtttgttt tatgcttgtt tatgatgcat   180
gtagtgcaaa gctaa                                                    195
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<210> 699
<211> 1305
<212> DNA
<213> B.fragilis

<400> 699

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actcttaagt taaaaattat gaaactgatt aaatatccgg accggtcgca atggaatgag    60
atcttgaagc gtcctgtgct tgagacagaa aatcttttcg atactgtacg caatattatt   120
aaccgtgtga gagccggagg ggactgggtg gtcatggaat atgaggctgt gtttgataaa   180
gctgaactca cctcattggc tgttacttct gcggaaatag aagaagcaga aaaggaggta   240
cccatcgaac tgaaggcagc tatttatctg gctaaacgta atattgagac atttcattct   300
gcacagcgtt ttgaggggaa aaaggtggac acgatggaag gtgttacttg ctggcaaaaa   360
gctgttgcta ttgaaaaggt cggattgtat atccccggag ggacagcccc tctattctcc   420
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gaaaaatctt tggccaacag taagttgata ttggtgaagg atatggagga agctttggaa   960
cttaccaatg cttacgctcc tgagcacctg attattgaga cgaaggacta tatggaagta  1020
gccggacaga tagtcaatgc cggttcggta tttttgggtg ccttctctcc cgaaagcgca  1080
ggtgattatg cttcgggaac taaccatact ttacctacca acggctatgc caaagcctat  1140
agtggagtga gcttggacag tttcatccgt aagatcactt ttcaagagat acttcccagt  1200
ggaatgtcgg ctattggccc ggctatcgag gtgatggctg ccaatgaaca cctggatgca  1260
cataaaaatg cggtaactgt tagattggag gagataagaa aatga                  1305
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<210> 700
<211> 360
<212> DNA

<213> B.fragilis

<400> 700

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aaaaggaagt ttaacaggta catcttccga gaaaggagac atagacaaaa ttattattac    60
caatataaaa taaaaagaat gaaaaagaaa tattatgcag cgttattagc tgtagttgtt   120
attgcattta cgggatataa tgtttatcag agtcaaaagg cggatgcctc tttatctgat   180
ttggcaatgg ctaacgtaga agcattggca aatggagaac tttcgaatgg aaattgtgaa   240
ggttcttggt cacaagaatg ttgtaagtgt gattatattc attatactta tgcttgtgca   300
atagaagtga ctggtaatag ctgctataca gtaagtggat gtagccatta tacaaattaa   360
```

<210> 701
<211> 207
<212> DNA
<213> B.fragilis

<400> 701

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tgtatatcta cctcattcaa attcataacc gatcaatttt tctcagaaga aacaaagaat    60
cagagtaata gttcaacaaa acaaagatta tctaaaatgt catctccaca ttacaatcta   120
acaaaaccac aaattctatt tttctctttt cataaaaaag taataaaacc cgatttgcaa   180
aaacaaataa aacgactacc tttgtga                                        207
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<210> 702
<211> 1911
<212> DNA
<213> B.fragilis

<400> 702

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ctttgcacta catgcatcat aaacaagcat aaaacaaaca tcgggaaaac aacatttact    60
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acatatgctg ccgataacaa agcaacaagg cacgtgtcag cgctgctgaa cctgatcgac   180
aacagcctca actatagcaa agaagctccc aacgacagta ttatccaatg gggcaacgaa   240
ttggctcctc tcctgaaaaa gcagaaagaa tataaaactc tatttcagtt gaaacaactg   300
attgtgacag cttatgcctc acgaggagac atgaacatgg ccatcgacca tgcccgccgg   360
atgtataagg aagccaaaga attgaactcc cccatcggta tagctctttc cagccgtgcc   420
attggggatg cctacttgaa tgccaacatg cagcaacccg ccatcgaatc ttataaagaa   480
gctctggaat tgcttgacaa aataccgggt agcgaaatcc tcgaacaaga gattcttccg   540
aaattcatcc tgaccctgat tcaggcctcc cacatggacg aggtacgcat ctatctgcaa   600
aagtttgaaa acctgtatgc cgataaccct aatcctacat tccactttttt catatgtgcg   660
tgcaatgcct actataacat cgagtccggt gatcccgaaa agggaaaagc cgaactggac   720
aaagccagga aaatccacga caactgaat tatctctacc tgcgtagtat ctacaactat   780
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cgcatccggc aggagtccaa ccgacttctc cgctccaaag aagaattgga aatagcccgt  1200
aagtatgccg agaactcgat acgtaccaaa agtctgttcc tgtcgaacat gagtcacgaa  1260
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aagcagacac aagccggagt cagttttgtc acttcactgg atagactgac tttgcgtaca  1560
gacgaggcac gcctgcaaca ggtattgatc aacctgctga tcaatgccac caagttcact  1620
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gtgacagata ccggatgtgg tatcctccgt gaaaaacagg accagatatt caatcgtttt  1740
gagaaactga cgaaggtgc acagggaaca ggtctgggac tctcgatttg tcgacttatc  1800
atcgaacaaa tcggagggag aatatggatt gacccggact acaccgaagg tgcgcgattc  1860
cggtttacac accccgtccg gcccgcaaag ggaaaggagg cagaaagatg a           1911
```

<210> 703
<211> 1170
<212> DNA
<213> B.fragilis

<400> 703
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gaatgccaaa ctgattggag cactgaaaaa atatcaatag gaaaaatgaa aaagaaagta    60
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tcactggaga agcttgaatt ctatcctaaa gttttccgca atttgggctt tattcgcagt   180
aaacttgatt ttgagtttgt catggtgacc aatcaggatg gtttgggcac ctcttctttc   240
ccggaagaaa ctttttggcc ggcgcacaat ctgatgttga aaactctggc cggagaaggt   300
attacgttcg atgatatcct gatagatcgt agtatgcccg aagattgtgc ttctacgagg   360
aagccgcgta caggaatgtt gactaagtat atttccaatc cggaatatga tctggagggc   420
agctttgtca ttggagatcg tccgacagat gtagaattgg ccaaaaatat aggttgccgt   480
gccatttacc ttcaggaatc cattgatttg ctgaaagaaa agggactgga aacttattgt   540
gctcttgcca ctactgattg ggatcgggtg gctgagttcc tttttgcagg agaacggaaa   600
gcagaaatac gcaggacaac gaaagaaacc gatatcctag tagctctcaa tctggatggt   660
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gccaagatga atctcaatat taaggctgag gggcagaatg agcatcacaa gatagaggga  1080
atattcaaag cgctggcccg tgcgttgaag atggcgttga aaaaggatat ctatcatttc  1140
gaaatgccgt ccagtaaagg agtttttgtaa                                  1170
```

<210> 704
<211> 2817
<212> DNA
<213> B.fragilis

<400> 704
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gctatgggta caatgattca gcaatataat cttagagaag aagattttcg taatgagcgc   180
tttgcgcata ttcccggtca actgaagggg aataatgatt tactttgtct cacacgccct   240
gatgtgattc gggatataca ccgtaagtat ctagaagccg gtgcagatat cattgagacg   300
aatactttta gttctactac tatttctatg ccgattatc atgtacaaga gtatgtgcgt   360
gaaatgaatc aagcggctgt aaagctggca cgtgaagtgg ccgatgaata tacggcacta   420
aatcccgata aaccccgttt cgtagccggt tcggtaggtc ctaccaataa aacatgttct   480
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ggagaggaga aattccttga acatgctcgt acggttcgcc aatatggtgc ggctgtggta  1500
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gtgatggctt ttgatgagaa agggcaagct gatacagcca cccgtaaaat agaagtttgc   1560
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gtatttcttt accatgccat tcagaaaggg atggatatgg ggattgtgaa tccgggtact   1860
tctgtattgt atacagatat tccggcggat gtactcgaga ggattgaaga tgtagtatta   1920
aaccggagaa gtgatgccgc agaacgattg atagaattgg ctgaccggtt aaaggaggct   1980
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gtgcatgaca ttggcaaaaa tatagtctcg gttgtgatgg catgtaatgg ttacgatatt   2400
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gagttggcaa aagaattatc cggtgaatat gaagcccttc gtgataagag cggcatgatg   2760
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<210> 705
<211> 2367
<212> DNA
<213> B.fragilis

<400> 705

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ttgaaacatt ccgaacccct ccaacgggag acaaattcgg atttccgatt cagccaaaca   180
tccctaattc atcatttaaa gattattgcg tttgttaagt ttccgacctc tgcgtcgcag   240
cttcagccgt acgtatttca acgaataaaa ttaaaatatt taaataactc actatactgt   300
atgtataaca tcattcaatt gaacgacaag aatttgtcgg aactacaagc tattgcccag   360
gaattgggta tcaaaaaaac agactcactt aagaaagaag aacttgtcta caaaatcctc   420
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cgcaaagaag ataagaaaaa acgctctcgg gtgacagtaa agaaggaaaa cgccgacaag   540
gttttctctt ctaccaagaa tggagaacta accaaaacag atgccaaaac acctgcagcc   600
aaaacacagc cacaacctaa aacaacagaa ccgaccccag aaacagctaa agaggcaaat   660
gccgaaacaa acgccactcc ggccgaatct gtcaaagtga caccttatgc cactccgaaa   720
aagaaaccgg gacgtccccg taaaaatcag gtagaaacag aagctaaacc cgcagaagaa   780
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gaaacagaaa aacgtcccat cagcaaaccg attctcaaac ccaaaccggc cgttgtagac   900
gaagaaagct cgatcctctc ggatatagat gcagacgatg attttatccc catcgaagac   960
ctgccttcgg aaaaagtaga attgccaacc gaactgttcg gcaaatttga atcgaccaaa  1020
gccgaagcag caacagcccc cgaacctgtg gcacaacccc aacgcccgcg tgtgattcgc  1080
ccacgagaca acaataacaa caacaattac aacaacaata ataataacca acgcaacaat  1140
aaccagcgtc agcctgtaca acagcgtccc atgccgcaac aaaatgccgc cgaagccgca  1200
cccgttcagg aacgccgcgt gattgaacgt gagaaacctt atgaatttga tgatatcctc  1260
accggaaccg gtgtattgga aatcatgcag gatggttacg gattcctccg ttcgtcagat  1320
tataactacc tctcttcacc ggacgatatc tacgtttcgc aatcccagat caaactattc  1380
ggtctgaaga ccggtgacgt agtagaaggt gtaatccgtc cgcccaaaga aggcgaaaaa  1440
tacttcccgc tggtaaaggt ttctaaaatc aacggacgtg atgccgcttt cgtacgtgac  1500
cgtgtaccgt cgaccatct cactccgctg ttcccggacg aaaagttcaa gctttgcaag  1560
ggaggctact ccgactcgat gtcggcacgt gtagtcgacc tctttttcacc aatcggtaaa  1620
ggacagcgtg ccttgatcgt ggctcagccc aagaccggta aaaccatcct gatgaaagaa  1680
atcgccaatg ccatcgctgc caaccatccg gaagtatata tgatcatgtt gttgattgac  1740
gaacgtccgg aagaagtaac cgacatggcc cgcagtgtca atgcggaagt gattgcttct  1800
```

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acattcgacg aacctgccga acgccatgtg aaaattgccg gcatcgtact cgaaaaagct    1860
aaaagattgg tagagtgcgg acacgatgta gtgatcttcc tcgactctat cacccgtctg    1920
gcgcgcgcat acaatactgt atctccggca tcaggaaagg tactctcggg tggtgtggat    1980
gccaatgcac tacacaaacc gaaacgtttc ttcggagcag cccgtaacat agagaacgga    2040
ggttcgctca ccattatcgc tactgccctg atcgacaccg gttcgaagat ggacgaagta    2100
atctttgaag agttcaaggg tacaggtaac atggagttgc agctcgaccg caacctaagt    2160
aacaaacgta tcttccctgc tgtcaacatt gtggcatcga gcacccgccg cgacgacttg    2220
ctgctcgaca aacagacact ggaccgcatg tggattctac gcaagtatct gtcggatatg    2280
aatcctatcg aagcaatgga tttcgtaaaa gacagattgg aaaaaaccaa agacaacgac    2340
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```

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<210> 706
<211> 1143
<212> DNA
<213> B.fragilis
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<400> 706
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cactctctta ttcaaaaaga aaaagaagca ttcaagccac aagttgaaaa tatcttgaag    180
gaggcagttg ccaacaatac aatccaaaaa tgtaaagata tacccttaaa tggttttaat    240
aactcaccta acaaaatagg tacgtatgag actcggacct tctgttcaag agataccttg    300
tttacctatc agcacaaaat tcaagacgtg gatagtgaaa tattattcgc tcgccaattg    360
gggttactta tgatggatag tttacaaagt agtgatatac aagccctaat aattaaagac    420
ttaaataaaa atgatataaa aggatatatc aatactggaa taattgtctc caaacatcta    480
caaagagaaa tatggagtca accatcaaat agcatccctc gcaatgcaga aatgattacc    540
tatcgtctag aaaatgaaat tgttagtgta gattacataa tgtatatcga ctatagtttc    600
tcaactttgt ggaagcgaat gcctaaaacc aatatctaca tcaatttagt agtcgaagtg    660
attctcatct acaccattac tctatttgta ctatactata ggaaacagca aaagaacaga    720
tctgtatcta cagttgatat aacatcagat cccaatatta tcacggaccc catatcagtt    780
gacaatactg tagaaacaga aaagcggact aattctacca taaaagagga gttatcattc    840
aaggatcaat ttgtctttga gaaagacttt gtcctattca atgaccgtcc gatcaaaatg    900
cctaatcaac aacaaaagat attattattt ttcttaaata ggcctaatta cagagtgaac    960
aaacacgaat tgaaggaaga attttggcct aaaaacagtg atccaaccaa taatatgaca    1020
agcgcaatca ataaattaaa gaaaatttta gaggaaatca acagtaagta tacaattatc    1080
accgacaaga ctaatgagga atactatgta ctaatcaggg ataaatcagc agaaaaaata    1140
tag    1143
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<210> 707
<211> 402
<212> DNA
<213> B.fragilis
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<400> 707
atggagattc tgtttcctga actattgtac tcaattattg ttttaaataa acgtttaaga    60
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ttgatacttc gtgatcatct ggcacttgaa agaaccaagc tggctaatga aagaactttg    180
tttgcatata tccgtatggc actttacctt ttgactgtgg ggatagggat atttcaaatt    240
gaaagcattt cacgtttgga tgggctggcg tggggatgta ttatagccgg aatcttttg    300
tttttcttgg gctttgtccg tttcgaacaa atgagaaagc atttgaaaca gtatacgaaa    360
acatgtcgtg atactgagaa tgaatcgtca cggaagaagt ga    402
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<210> 708
<211> 1929
<212> DNA
<213> B.fragilis
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<400> 708
aaaatgaact acggattcgt aaaagttgcg gcggccgttc cccgcgtaaa agtagcagat    60
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tgcaaattta attctgaaag attggagggt cttattacca tagccgaagg taaaggagta    120
cagattctca cttttcccga aatgtgcatt accggatata cttgtggaga cttgttcgcc    180
cagcaacttt tgcttgaaca ggcagaaatg gctttgatac agattctaaa cagtacccgc    240
caactggaca tcatttccat actgggcatg ccggtagtag tcaactccac agtaattaat    300
gctgcagtag ttatccagaa aggcaaaata ctgggagtag tgcccaaaac ttacctgcct    360
aattataaag agttctacga gcaacgttgg tttacatccg ccctacaagt ctcggaaaac    420
agtgtgcggc tttgcggaca gattgtcccg atgggcaaca atctgttgtt cgaaactgcg    480
gaaacaactt tcggcataga aatctgtgag gacctttggg ctaccgttcc gcccagttcc    540
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ggtaaacaca attatctttg ctctctgatc agccagcaat ctgcacgctg catctccggt    660
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ggacttattt acgaaaacgg atatctactg gcacgaagtg aacgtttctg catggaggaa    780
cagttgatta tcaatgaaat tgatgtggaa tgtatccgtg cagagcgtcg ggtcaacaca    840
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tttgtcaaca gtaaagatct gaacctgacc cgtacattca atccacatcc ttttgttccg    960
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gcacaacgtc tgctacatac cggagcaaaa acagccgtaa taggtatttc cggaggactt   1080
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gccatcgacc tgatgaattc cttgggagtt tcaatacggg aaatcagtat cagggaagca   1260
tgtatccaac actttaaaga tatcggacac gatctcaata tacacgatgt aacgtacgag   1320
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atggtgatcg gaaccggaga cctgtcagaa ctcgcattgg gatgggcaac gtacaacgga   1440
gatcatatgt cgatgtatgg tgtcaacgca ggtattccca agacactggt gaaacactta   1500
gtacagtggg tagccgaaaa cggtatggat gaaacatcca aagcaactct gctggatatt   1560
gtggacactc ctatcagtcc ggaactgata ccggcagatg aaaacggaga aatcaaacaa   1620
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cggttcggct tccgcccgtc aaaaatctac ttcctggcac aaactgcatt cagtggagtt   1740
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cagtttaaac gctcttgcct gccggacgga ccgaaagtag gaagtatatc catcagcccc   1860
agaggagact ggcgcatgcc aagtgatgcc agttcggctg catggctgaa agaaatagcc   1920
gaattgtaa                                                           1929
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<210> 709
<211> 870
<212> DNA
<213> B.fragilis

<400> 709

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ccttacattc atcctcctgt aatccggaaa cgggatcttt gcgtaacgaa aaaaacaaaa     60
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caacactcca agacagagga agtcactcac ttcctgaaat caataaattg tgatcgctta    180
attctgaatg gtgatatcat tgacggatgg catttgcaga aaagcggttt gggtaaatgg    240
aaagctaaac atacggattt cttcaaagta ataatgaaga tgatggagaa tttcgggaca    300
caagtgattt atgttcgtgg taatcatgat gattttctag ataatctggc acctctgaat    360
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gtgacacatg gagatatttt tgatacggtg actactcaaa tgaaatggct ggctaagttg    480
ggcgacacag gatatacttt tctgttatgg ttgaataagg tatacaatct ccgcagaatg    540
aagcagggaa aaccttatta ttcccttttcc cagtctatta agaatagggt aaagactgcc    600
gtttcttata tttctgattt tgaaaaagag cttgttggcc tggcaagggc taaaaagtgt    660
gatggcgtga tatgcggtca tattcaccat cctgccaata cttttttatga agatatccat    720
tatctgaatt caggcgactg ggtagaaaca ctttcggctc ttactaaga tgaagatggt    780
aactggacta ccgctatttt tgatagtgga ttactaaagg aagataatca taaggaaaaa    840
caaactatat ccataacaat agcatcatga                                      870
```

<210> 710
<211> 579
<212> DNA
<213> B.fragilis

<400> 710

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cactgcgatc tttgcagcac catattaaaa agaggtaaag ttatgaaaag acatcttatt    60
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gatgataaat ccgacaataa gaacaaaaca gaactcaatt ctgtcgtcaa aaagacatgg   180
gagttctact ccaccatcaa acaaccttct gccgatgcac tggctaatgc gggtaactac   240
aaattcgggc aagaagccgg ttatctctat aaccaattca tgaagatcta tgtagtcagg   300
gaagaagtgg ttcccggaga ccctacccgc cgtaccgtaa ttcgcaaacc cactatctac   360
aacgcagtac gctccatcga gaaacagctg aacaaagagc tcaaaagcaa ccaaatgacc   420
agagagcaag tagctgcaga gttcacaaat gtactgaaag tagcgatttc tgcctatgat   480
tccgaaagcg aatcatttga agacgcttta cagataaatc gcaaaaatgc aaccgacctt   540
ctctccgtat ttcaaaatgt aaaactgaca gaaatctaa                          579
```

<210> 711
<211> 597
<212> DNA
<213> B.fragilis

<400> 711

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aaaacttatc aaaaagcctt tctgaaccat atatttccgt attttgtttt cctgatattt    60
ataaatatag aattcacctt attatatata gtggaaatga tagaagttac ggatgcctct   120
ttgcaaaaag ctgcgggtga gggaatggat gaatttatcc aggtgtttac agacaagtat   180
aaagaagtga ttggcgggga acttactgcc gaaacaatgc cactgttgac aggggagcag   240
cactctttgc tggcctatca gattttttcgg gatgaagtca tgttcggtgg ctttttgtcaa   300
ttgattcaga atgggtatgg aggttatatc tttgataatc cttttgcaaa ggtaatgcgc   360
ctgtggggag ccgaggattt ctcgaagttg gtttataaag ctaagaagat atacgatgct   420
catcgccacg atctggagaa agagcgtaca gaggatgaat ttatggctat gtacgagcaa   480
tacgaggcct ttgatgatct tgaagaagaa tatctggata ttgaggagga ggttacagca   540
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```

<210> 712
<211> 2031
<212> DNA
<213> B.fragilis

<400> 712

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cccggactac accgaaggtg cgcgattccg gtttacacac cccgtccggc ccgcaaaggg    60
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ggatggtgtc atgcaaatac acaaacggaa acggacagcc tgtatcgggt gacacagtca   180
cttccgcatg actcgactcg tctggaaatg ttcaagagac tggcacaaat agagcagctg   240
actcccaagt gtatcacctt ctcgggtctg ttgcgcgagg aagccacctt gcagaagaat   300
gacagataca acgccatagc cgcctatctg cacacagtgt actactataa ccaaaacaac   360
cgggacagcg taaaaaaatg gcttgacaca atggagcctt atgcccgcaa atcgcaaacc   420
tgggatctct attttgatgc gctccgcttt cagatagacc tctgcaccta cgaagagcag   480
tatgaacttg ccatcaacga agcgaaccag atgtacgaaa gagcccaaaa agtgaactgt   540
gcccgcggac tgatcggagc aaaacaatgc ctgggcaacg cctatatcag tacagagcga   600
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gcggtagtac gaatctcgat tctctgtcaa ctgatttcca taaccaagga tcagaaaaac   720
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gacatcctgg cagaagccgg acgaagtgcg gaagccattc ccctgtacat cgaaacgctc  1140
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aaatacaaca tcgacaaagt ggcattggaa gaggaacagc tgaaaagcta catccaactc  1260
ggcaccttaa tagtggtggt cattatcctg ataattctgg ttgctttcat gctccgcatt  1320
tcacacgtac gcaaggcttt ggaacgatcg gaaaaagaaa cacgggaaac aacccgtatg  1380
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```
gcggaagaag ccaacgaaat gaaaaatcgc tttttgtcga acataagcta tcacatccgc    1440
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gatgagctcc gtaaagaata ctcttccatc attcagaaga actccgaaga attgatgcgc    1560
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gaaaaacggg aaatcgactt taaggtgaca ctcgacacgg agaagcactt catcaacttc    1860
cgcatcacca actctccgct ggctgacgaa agatttactt cgcaagaggt atgcatccgt    1920
cacgaaatca accgcctgct atttgagtat ttcggaggaa gctacaaagt acagacaaat    1980
ccggacggaa agccggccat cctcttcacg tttccctcag gaagaaattg a              2031
```

<210> 713
<211> 759
<212> DNA
<213> B.fragilis

<400> 713
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agtgggtggc agccggatac cctttccagt gtagacgaaa agggagaggt gaagtatcat      60
aaacccgatt gcgctgtgaa aggaagtatg gatttgaacc gtaaattctt attgcgacaa     120
tatctgaaag attatctcag cgctgtagtg ggggataaga tagagggagc caatcattcg     180
gatttttcgg atgcctgtct gttgcatcag atagtggata cacctaaggt aagctatcag     240
gtagcctatc cacaatcccg gaagagatac cggtatatac gttatacttc gacccccgaa     300
aaaacacttc aactggcgga attacagctt ttccgaaaag tggatgatca agagaaaata     360
acggctaagg tcatcgatgg cagtaatgct tttattgcag atgaccggtt tgatcgtttt     420
aaagtgaatg acggtgatgg attaaccttt tttcttacga aagagaaggg agcattcgtt     480
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gataacttca ttcggttagg ggatcagtat gaactgtttt atcaggatgg atttcgtggt     600
tggatttctt taggcaggca agtagcctca gaattaacat tgcactatga caatataccc     660
caaaattcag tactttggct tcggaatta tcaagaggga gagaagaaac cgtatttcga     720
aacgaggacg gtcggcaggt tttctttgta aagtggtaa                            759
```

<210> 714
<211> 948
<212> DNA
<213> B.fragilis

<400> 714
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gcttcattag cctatgcgac tttgttttca attattcctt ttctttccct tctagtcact     180
gtcggtgtct ttttccatat ggatttggcc aatcaacttt atgtccaact acaaccgatt     240
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tttgcagaaa tacaaagttc attaaattca atttggggaa taaaagccgt ccctaaaaag     420
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atgagtgtca ctaccatcat ctttacactc atatttaaaa tattacccga tgccaaaatc     660
aagagcaaag acgtttgcat cggagctgtt gtaaccacca tactgctact gataggtcaa     720
tggggaattt ccttttatat aggaatagcc aatgtgggga ccgtctatgg ggctgctgcg     780
ttcatggtgg ttttcgtcac ctggatttat tattcttcca tcatcatata taccggtgca     840
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<210> 715
<211> 192
<212> DNA
<213> B.fragilis

<400> 715
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agacagagtc cggcagatat tcttgcttta gtaatgacga cataccatcc tcattctctt   120
ctaccaaaac tgttgtctcc catcggtctt cttaaagatc cgttcgtcct ttccctccgt   180
atgattcttt aa   192

<210> 716
<211> 2181
<212> DNA
<213> B.fragilis

<400> 716
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gtttgttccg caaaggcgga cgagggtatg tggttactgc aattaatgca gcagcaacac   120
tctatcgata tgatgaaaaa acagggactg aaactcgagg cacaggattt gtataatcct   180
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catagctctg tagagcatga ttatctgaca gatggatttt gggcaacttc aagagacaaa   360
gaattgccga ctccaggact gaaatttaca tttatcgaac gcatagaaga cattacggat   420
attgtaaatt taagaattgc cgctaaagaa atcactgaat cagaatcatt cagcagtaca   480
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gcagaacagg aagctaaatt cgctaagttt gccaaagaaa aaaataatac cgactacatg 1140
aatgtagtgg caaagatcga cgaggctgta gctaaaactt ctccaatcaa atatcaacag 1200
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gaaatgacga ttgttgaata a   2181

<210> 717
<211> 1044
<212> DNA
<213> B.fragilis

<400> 717
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ggggtagctt gtatactttt tgtctcatgc aaacccacgg aggttgacgt gcctattact   120

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tattattcgt  cttttctctt  gaaagatact  actgttatgc  tttctaaagt  agaaatggat  180
cctatgcagg  taaatgcacg  gtgtatggtg  tgggatggcg  ataagcgggt  attggttcgt  240
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tataccggta  gtttgtcaga  atataaacag  atattagcca  aatgcaatga  aggcttttac  360
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gagcgtactg  aggtaagatt  taaaacgata  tttgacttta  agtttgccta  tgcgcacgaa  660
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cggatttatg  atttgagtgc  ccgattattg  cacgatgtat  gtcttgatta  tgcatctaat  780
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gattgggacg  gtagaccaat  agcgcgttat  cgattggatg  aaaagatttt  tttctttttt  960
atagatccgg  atagaaatct  tttttgtggt  attaactcaa  ataatgggca  gtctttttat  1020
ttccttgatt  tagatataaa  ttag                                          1044
```

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<210> 718
<211> 798
<212> DNA
<213> B.fragilis
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<400> 718
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agtcgcaagt  ataagattga  aggcgcctct  tctgtaacca  gtctggacgg  taaaatgctt  180
tttattaaag  tacttcagaa  tggcgagtgg  ctcaatattg  attctgccga  agtggtgcat  240
ggactatttt  cgatgaaagg  taaagtcgat  tcggtagtaa  tggctacact  ctatatcggc  300
gacgaaagca  tcatgccttt  agtgattgaa  aaaggtaata  ttcaggtttc  aattacaaat  360
acagaattgg  tagcaaaagg  aaccgctctg  aacaatgccc  tctacgcttt  tattgataaa  420
aagaattcat  tggatgttca  gatagaagaa  ttgcaacgta  aagaagcccg  catggtgatg  480
gatggtgccg  acttggctga  tattcatgag  caattgactc  acgagggcga  ttcgttaatg  540
caagatatga  atggctttat  caaaaaattt  atctcagata  actacgaaac  agttttaggt  600
ccaagtgtat  ttatgatgct  ttgcagcaca  ctaccttatc  ctgttatgac  tccccaaata  660
gaggacatca  tgaaagatgc  tccttattcg  tttaagaata  acaaattagt  gaaggatttt  720
attacaaaag  cgaaatcgaa  tatggagctg  attgaagagc  atcagcgcat  ggaacaaaat  780
gcgaccttga  accattag                                                  798
```

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<210> 719
<211> 1158
<212> DNA
<213> B.fragilis
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<400> 719
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caccaggtag  tggaggttct  tgtcggcaaa  agttcgtcac  gtaccttgcc  cggctttttc  180
aaccggagta  tccaggcacc  ggtaaagcgt  ttcaccagtc  cgaatttttt  gcctacagcc  240
gaaaataaac  gggctgatct  gaaaaagagt  tttgcataca  atctgataca  cgtaccggaa  300
tattttcgca  gtatgtgtta  tatcaatcag  cgcattaagg  aaacaggggc  ggaagttgtg  360
atcaacttct  acgaacttct  gaccggactt  acctacgcac  tcttccgtcc  ctccgttcct  420
tatgtttgca  tcggacacca  atatctgttt  ttacacaacc  actttgagtt  tcctcgaaaa  480
agtgtgattc  aactctccat  gttgcgcttt  ttcacacgga  tgacgagtct  gcgcgctagc  540
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gttcctcctc  tgcttcgcag  ggaagtgacc  gctatgcagt  cggcacaggg  taactacatt  660
cacggatata  tggttaactc  aggttttgca  gatagtgtag  aggctttcca  tgccttgcat  720
cctgaaattc  ctatgcactt  tttctgggat  aaacaggatg  ctgacgaggt  gactaaagtg  780
gatgccacac  tgagttttca  tcagattgat  gatgtgaaat  ttcttaatag  aatggccggt  840
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```
aaacctgtac tgatggttcc tgctcatatt gagcaggatt gcaatgctta tgatgcccgg    960
caggccggtg ccggaattat tggagaatct ttcgatttgg agtcgttgct tcgttttgcc   1020
ggaacgtatg ttcccaaccg ggaatttatt cgttgggttc gtagctgtga acgacagatc   1080
attggagaac ttgaacgact tgctgatcag cattcggctg tcactgtacc tacattaact   1140
aattattttc cgatatga                                                 1158
```

<210> 720
<211> 282
<212> DNA
<213> B.fragilis

<400> 720

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agtggtaaaa acaggaaaga aacagatcaa aaaaagagga atttctttta tttattttgt     60
aaaatagact gtaaatcgct gaatggtctg attttgttgt tttttgaccg gatattagct    120
tccttaatct tattttttct caaactttgt aaggtaaatc aatgtagaaa gtatgactat    180
aatgaagttg agactgggag ttcgtgggat gatgtggcta accttggtaa ttatgatgtg    240
gggcatcata tcttgtcgaa ctcaagaaga gaaatgtctt ga                       282
```

<210> 721
<211> 873
<212> DNA
<213> B.fragilis

<400> 721

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atatttatga aatacttata tgtgttatta gctttttctt ttttgttttc ttgtaaagat     60
gagaataaaa aacatgcgga atctgttttg agggaatgga tgaataagga aattgttttc    120
ccgaataaaa tgtattttag tattcagggt aaagagaatg ttgattttcg tataaaagat    180
accgaatata agattgtcgc ctatgttgat tctgccggtt gcaccagttg taaattacac    240
ttgtctaaat ggaaagagtt aatccattat gtggattcta ttcagtctga gcgtgtacag    300
tttttgtttt ttttctttcc caagaatgga agagacatat atcatacaat gagaatggat    360
aaatttacct atccggtttg tgttgacaca ctcgattctt ttaataagtt aaatcatttt    420
cctgacgatg taagattcca gacttttttg ctgaataagg agaataaggt tgtagcagta    480
ggtaacccca ttcataaccc gaatatcaga gatttatttt tgaatataat ttccggtggc    540
acttctcttc cagatgaaaa acgtcctcaa acagaggtga agatagaggc tctgtctatg    600
gacttgggta tgtttgattg gaaaaaagaa cagaaatgta tttttaccgt tgagaatacg    660
ggaaaagagt tgcttgtgat tgatgatgtc aatacttcgt gcggatgtac tacagtggag    720
tattcgagag aaccggttca gtccggaaag acgatagata ttaccgtcgt ttataaggct    780
gaatatccgg agcattttaa caagacgatt actgtctact gtaactcgcc tgtttcacct    840
ttgcaattga aaataaaagg agatgctaaa taa                                 873
```

<210> 722
<211> 411
<212> DNA
<213> B.fragilis

<400> 722

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tcggttatga atttgaatga ggtagatata cattatttaa ttgcagccat tagtgtgata     60
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aaattttggc atctggtatt ttttttgttg ggactgctgg ctgattctgt gggaacggct    180
ttaatggaga atattgcgcg actcacacac ttgcatgatg aaatacatac tgtgaccggc    240
attatcgcta tcctgttgat gtttattcac gctatgtggg ctatctggac gtatgtgaaa    300
gggagtgaaa gagccaagga acatttcaac cgtttcagta ttgtggtgtg gtgcatttgg    360
ttgatacctt actgcatagg cgtatatctt ggtatgtcat tgcatcattg a             411
```

<210> 723
<211> 1068
<212> DNA
<213> B.fragilis

<400> 723

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aatctcatga aatactgtct gacatttctc tttcttttgg taatctttac tgggtgcact      60
tcagatttgc cgaaagatcg gatgttgtat gcttctttc ctaaggagga gacactacat      120
tctaaggtaa ttcagcttga ttcggtttat atgcgttatc cgtttcgggt acatgtgtcc     180
ggtgatcagg ctgttgtcct ggatttacat ggtactgatg tgtattgcca tcttttcat      240
tatcctgatt tccattatct gtcttcgttt ggcaggagag gagattcacc ggaagagatg      300
ctttcagtag aaacagtgaa atgtatagat ggttcatttt ggactttaga tgccaacaaa      360
ggcgagttaa ctaggtttga gtttgtttcg gatagagatt cgcttctgcg tgcagaagcg      420
atctctttcg ataaagacag cattctgcgt gctcttgatt ttgtggcatt caatgatacg      480
acttttctga tacctgacta ttcgggagat agccgattct gttgggtgaa ccgacaaggg      540
aagtttttga agaaaagtgg agtgattcct tcattgaacg aagaagcatt gaaagaggcg      600
cgtcctgcct tagcacaagc ttggcgcagt tttattgatt ataatcctca taacggagtg      660
ttggttgctg ctactcaatt aggtgaagtt cttgagattt ataatcttca aaacggtttt      720
cataggtct gtttaggtcc taaaggggaa ccggaattca aacttgcggg cgggtatgct       780
attccggatg ggatcatggg attctcggat gtgcaggtta cggatgaggc tatttatgct      840
gttttccatg gtcacacttt taaagagatt atggcacagc accaaaaaga gggaagagct      900
acagatggtg gacaatatat ttatgttttc aacttacaag gggaacctttt atgtaaatat     960
accttagatc gttatatcac aggtttccat gttgatgaaa gaaataagac tattacagca     1020
acagatgtta ataacgacca acccattgtg gagttccgct ttggctaa                  1068
```

<210> 724
<211> 564
<212> DNA
<213> B.fragilis

<400> 724

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gacgaaatga aaaagtttag atgtactgtc tgcggttatg tttatgaagg tgacgcagct      60
cctgagaaat gtcctttgtg taaagctcct gcaagcaaat cgtagaagt tgttgaagaa       120
gaaggtggtg cactcacttt tgttgacgaa cacgtaatcg gtgtagctaa aggttgtgac      180
gaagaaatga ttaaagacct gaacaatcac ttcatgggcg aatgtactga agttggtatg      240
tatttggcta tgagccgtca ggccgatcgc gaaggctatc ctgaagtagc tgaagctttc      300
aaacgttatg cttgggaaga agcagaacat gcttctaagt ttgctgaact gttgggtgat      360
tgcgtatggg atactaaaac aaaccttgaa aagagaatga atgctgaagc cggtgcttgc      420
gaagacaaaa aacgtatcgc tacacgtgct aaagctttga atctggatgc tatccacgat      480
accgtacacg aaatgtgtaa agacgaagct cgtcatggta aaggtttcga aggactttat      540
aaccgctatt tcggtaagaa ataa                                            564
```

<210> 725
<211> 2172
<212> DNA
<213> B.fragilis

<400> 725

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ataatgatga aaagaaactt attatctgct gcgtttgcac tgatggcact ggccgtcagt      60
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gatctcgggt tacaaatccc tatagaggaa gtctacaatc cggatggaat agctttaaaa      180
gatgctgttg tacatttcgg aggcggatgt accggtgaaa tcatctcggc ggagggattg      240
gtattgacta atcaccactg cggatatgga gcaattcaac aacatagcag tgtagatcac      300
gattatctga caaatggatt ctgggcaatg aaccggaacg aagagttacc ctgcaaaggg      360
ttgacagtaa ccttcatcga ccgtatcctg acgtgacaa cctatgtaaa cgagcaactt       420
aaaaaagatg acgatcccaa cggcatcaat tatttgtctc ccaaatatct ggcaacggtt      480
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aaaccatttt acggaggcaa caaatactat ctatttgtaa agacagtcta caatgacatt      600
cgcatggtag gtgcccctcc ttcttcgatc ggcaaatttg gagctgatac cgacaactgg      660
atgtggccac gccacacagg agacttttct ttgttccgca tctatgcaga caagaacggt      720
cagccggctg aatactctaa agacaatgtt cctttacaag taaagaaaca tttgacaatc      780
agcctggcag gagttaaaga aggtgatttt acatttgtca tgggatttcc cggacgcaac      840
tggcgctaca tgatttccga cgaagtgaaa gaacgaatgc aaacaaccaa cttcatgcgc      900
caccacgtac gtgaggcacg gcaggccgta ctgatggatc aaatgctgaa agatccggca      960
```

```
gtacgcatac attatgcaag caaatatgct tcctccgcta attactggaa aaatgccatc      1020
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caactgttgg caatgggacg tgagaaaggc gatgactctt atcaaaaggc ttttgatgag      1140
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gcattggtaa cggcactcga tttcatgaaa attccttcaa ccgacggatt gaaaaaagca      1260
cttgaaagca aaaatgccac aaagattaaa gaagaaaccg ataagctgaa agcagaagca      1320
gataaatatt tcgcatctgt tccgtttccg gaagtagaac gactcgtagg aaagaaaatg      1380
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caaaaactaa aacaactgta tcatgcaaaa gacttcggac attacgcgat ggaaaacgga      1920
gaaatgcctg tttgcttcat tgtcaataca gacaatacag gaggaaattc cggaagcccg      1980
gtattcaatg gaaaagggca attgatcggg accggattcg atcgtaatta tgaaggcctg      2040
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actctatta ttattgataa gtatgcaggt gcctcacaca tcatcaagga gctggatatt       2160
gtagaagaat aa                                                          2172
```

<210> 726
<211> 1560
<212> DNA
<213> B.fragilis

<400> 726

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cgacagatga atccgtttgt catggcactc tcttatggtg ccacttttat atcagcctct      180
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cgttcacgtg gtaaattgac taatgtgatc cgtttgggag ttttattttc aatttttagtg    1200
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aaggatgtgt tgatcgaagc ctatcctttt ccgatgatag atccgatatt gtttgcattg     1500
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<210> 727
<211> 1503
<212> DNA
<213> B.fragilis

<400> 727

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acccagaccc accccaaact cctgcttacc caaatctgca tgaatgcttt taaaagaggg  180
actgacggaa tgtatgctac caaaaaagta attcaagccg acggagagag tgcagatcaa  240
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cgcgcctact acttctatga actgactctc cgtttcggag acatccccta cagtcaggcc  420
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gcaggaatcc tccaagaatt gagagaagca gacgaaatac tggcaaatga cgcatctgtc  540
attgacggag acatcattta taacggaaat agcacccagt ggaggaaact gatcaactct  600
tttcgtctga aagtgctgat gaccctctcc aatcatacaa cagtagggaa tataaatatc  660
gcttctgagt ttaaaaacat tgcgacaaac agcccgttga tgaatagcct ggcagacaat  720
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tccggctatt atatggatga tacatttatc caacgtatgc gcgaacgtcg ggacccacgc  840
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tggatcagtg gcaatgcaca aacgtattac gagaaaggta tccgcgcctc attctctttc 1140
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tggatgtatc cgcaaggaga atatgataac aacggtacta acgtagaaac ggctattaca 1440
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<210> 728
<211> 2013
<212> DNA
<213> B.fragilis

<400> 728

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agaatgaaga aattatcctc ttttctgctt ttgttgctgg tcgtatttac ggcgcaggca   60
cagatacaag agcctgtgaa gtttaaaacg gagctgaaaa ccctgtcggg agccgaagcg  120
gaaatcgttt ttacaggtac gatcgatgcc ggttggcatg tatattctac cgatttaggt  180
gatggtggtc ctatctccgc tacttttaat gtagagaaga tgtcaggtgc cgaagttgtt  240
ggtaaattaa cccctcgggg aaaagaagtt tcggactttg acaaactgtt cgaaatgaaa  300
gtacgctatt ttgaaaaaac ggctcaattt atacagaaga taaagtttac cggcagtgac  360
tattcaatag aagggtatct ggaatatggt gcatgcaacg atgaaaattg tctgcctcct  420
acacaagttc cctttaaatt ttcgggtaaa gccgctgcta ctgccgaagt ctcggcaaaa  480
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ccgacagcta caactgttac cactgcgata ggcagtgttg acttatggaa gcctgtaatt  600
aatgatttga agaaattcgg tgaggcaaac tctcaggaag atatgtcatg gatctatatt  660
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ttgttctgtc tgatgttgat cgtatttgct gcttctttct tcggagcttt cgaactgaca  960
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agtattttttt tgatggcgtt tacattatcg cttgtatctt tttcttgtac aggtcctatt 1080
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```
tctcgtttct tcatggcact ggtttcatta gcttttgctg tttatatggt tccgggctta      1500
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aatctttata ccaatgaggt acatgccaag ttcgatgatt atgatttagg tatggaatat      1620
gcccgtcagc ataacaagcc ggtaatgctc gactttacag gatatggttg tgtgaactgt      1680
cgtaaaatgg agcttgccgt atggaccgat ccgaaggtta gcagcatcat taataatgac      1740
tacgtactga ttactcttta tgttgacaat aagactccgc ttactgaacc ggtgaagatc      1800
atggaaaatg gtacagaacg cactttgcgt acggtaggtg ataaatggag ttatctgcag      1860
cgtgtgaagt ttggtgccaa tgcccagcct ttctatgttc tgatagacaa tgagggtaat      1920
ccgctgaaca agtcgtatgc ttatgatgag gatatatcca agtatatcaa tttcttgcaa      1980
acaggacttg aaaattatcg gaaagagaaa tag                                   2013
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<210> 729
<211> 1032
<212> DNA
<213> B.fragilis
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<400> 729
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cgtttgtcgg acgaactcct gatcagctat cttttggata tggctgttag tgaggactat      180
atctttatat tggctttggc agataatgcc tggttgcagg tatatgataa gactacaggg      240
caactgcttg gaagttttgt aacaagaggg cagggaccgg gtgaagcgac tactgcgaac      300
atgtgctatt ataatgcacg tgaaaagaaa atttctgtgt atgacgaatc ttctatgaag      360
ttattgactt atcagtttga taaagacgct gataattggg gagcgttgat agaagaatgg      420
tctttttatg atttaggagg tacactacgc cgggtgtggg aacttcggaa tggtaggttt      480
ttggtagatg gtcagttggg aacaaagtcg gatcagcaaa aacgttttca gatgttggca      540
gatgcaaaag tggtggctga ttacaatgat tttcctatag atactccgaa agaacgttcc      600
gtttggtcat cgccagcaat tgcgatatct ccggattgta aaaagatggc cgtaggaact      660
ttatatggag gaatccttga attatttgat ttatcacaaa acatagaatt aagagcaatc      720
cgaaaatttt atcctccggt cgtgcaatat ttatccggaa ctatccaaaa cacagaggag      780
actgtttggg gcttttctgc gttatgtgct acagatgaaa ggatttatag tgtatttata      840
ggtgacaaga atcccaattt atttaataac ttatctgttt ttgattggga tggccgggaa      900
ttaatcaaat ataatactga ttgcctcgtt ttgagaattt gtgcttcaac tcaggaacca      960
aataaactgt atgggattgc tttttctgaa actcatgaat tttatctggt ctctttttcc     1020
ttgggttctt ga                                                         1032
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<210> 730
<211> 777
<212> DNA
<213> B.fragilis
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<400> 730
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aaaaagagc taattatgac ttattcacac gaagtggaac acatgtgtgt tgtaaagaag       120
ggtcctaacc acggaccggc tcccataccc gaagaaggaa aatgggtaaa atcaaaagaa      180
attgttgata tttcaggtct gacacacggt gtgggttggt gtgctcctca gcagggtgca      240
tgtaagctga ctctgaacgt aaaagaaggt atcatccagg aagctctggt tgaaactatc      300
ggctgttcag gtatgactca ctcagctgct atggctgctg aaatcctccc gggaaaaact      360
atcctcgaag cattgaacac agacttagtt tgtgacgcca tcaacactgc tatgcgcgaa      420
ctcttcttac agatcgttta cggacgtact cagtcagctt tctcagaagg tggtctgatc      480
atcggtgcag tcttgaaga cttaggtaaa ggtctgcgta gccaggtagg tacattgtac      540
ggtactttgg ctaaaggtcc tcgttacctt gaaatggcag aaggttacat caagacaatt      600
gctcttgaca aaaacgatga aatctgcgga tacgaattcg ttcacatggg caaattcatg      660
gatgaaatca gaagggtac tgatgcgaat gaagcattga agaaagttac cggtacttac      720
ggacgcttca ctgcagaaca gggagctgtt aaacacattg atccacgtca cgaataa        777
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<210> 731
<211> 195
<212> DNA
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<213> B.fragilis

<400> 731
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ggttattatg cttggcttac tgtaaatatg cagtgtaatg cgtatgggga ttcacccgaa   120
gaagcggtaa aaaacctgga acagaccatg gaagacctgg ttgaagaaat gtatttggta   180
gaggatttta tatag   195

<210> 732
<211> 582
<212> DNA
<213> B.fragilis

<400> 732
atcaatgtag aaagtatgac tataatgaag ttgagactgg gagttcgtgg gatgatgtgg   60
ctaaccttgg taattatgat gtggggcatc atatcttgtc gaactcaaga agagaaatgt   120
cttgaagagg tttttatctct tccgctcgcc aataaagaag aactacaaaa agtactggat   180
cattataaag atgacagcct gaagtatcag gccgtttgct ttctaatcag gaatatgcct   240
tttcatgcag gatacgaggg aaatgctttg aagtattatt accaatattt tgatatttac   300
gcgcaaggaa aattaggacc gcacgaagtg attgattctt taaaagaaaa ttcgtttttct   360
gtttcgcaat taaaacggat agaggatatt gccaatattg attcttcttt actggtgcag   420
aacgtggatt gggctttttaa ggtgtggaga gagcagcctt ggggcaagaa tgtaagtttt   480
gataattttt gtgagtttgt tctaccttat cgattgggag atgaaccact tggattctgg   540
agagaagata tttataaacg ctataatcca atattagatt ag   582

<210> 733
<211> 1026
<212> DNA
<213> B.fragilis

<400> 733
ggaggaaaag aaattatgat tagagaagta aaatttgaaa gtcaggaccg ccgtatcaaa   60
ggtatcatcg aagccttgaa cgctaacggc atcaaagaca tcgaagaagc taacgctatc   120
tgcgaagctg ctggagttga tccttataaa acgtgtgaag aaactcaacc gatctgttttt   180
gaaaatgcta agtgggctta cgtagtaggt gctgctatcg ctatcaagaa aggttgcaaa   240
aacgctgctg atgctgccga agctatcggt ataggtctgc aggcattctg tatcccgggt   300
tctgtagctg acgaccgtaa ggttggtatc ggtcatggaa atctggctgc tatgttgtta   360
cgtgaagaaa ccaaatgttt cgctttcttg gcaggtcacg aatctttcgc tgctgccgaa   420
ggtgctatca aaatcgctgc aaaagcagac aaagtacgta agaacctct gcgttgtatc   480
ttgaacggtc ttggaaaaga tgctgctcag atcatctctc gtatcaacgg ctttacttat   540
gttcaaacac agtttgacta tttcacaggt gaactgaaag tagtacgtga aattgcttac   600
tctgacggtc ctcgtgcaaa agtaaaatgc tatggtgcag atgatgtacg tgaaggcgta   660
gctatcatgt ggaaagaagg tgtagatgta tctatcacag gtaactctac taacccgacg   720
cgtttccaac acccggttgc aggtacttac aagaaagaac gtgtactggc aggtaagcca   780
tacttctcag tagcttcagg tggtggtaca ggtcgtactc ttcacccgga taacatggct   840
gccggtcctg cttcatacgg tatgactgac actatgggtc gtatgcactc agacgctcag   900
ttcgccggtt cttcatccgt tcctgctcac gtagaaatga tgggattcct gggaattggt   960
aacaacccaa tggtaggctg tactgtggct tgtgcggtag atgtagctca ggcattggca   1020
aagtaa   1026

<210> 734
<211> 351
<212> DNA
<213> B.fragilis

<400> 734
aagatgaaag agtacattga tgtttttaaag aagtggaaag atttcgacgg tagagccaga   60
agacgtgaat actggatgtt tgtcttgttc atggctattt ttgctattgt cgcaagtatt   120
attgacgcta ttttgggtac gatttgcgta tttgtaggta tttattattt ggctatgctt   180

```
ctgcctatga ttgctgttag tatacgtcgt atgcacgata ttggcaaaag cggatggtgg    240
ttatttatca cttttcgtacc ggtgatcggc agcctttggt atctcttcct gactattcag    300
gacggacagc cgggtagcaa ccaatacggt gaaaaccccta aaggaattta a             351
```

```
<210> 735
<211> 1056
<212> DNA
<213> B.fragilis
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<400> 735
attggaggag ataagaaaat gaaaacattg caagaattaa cccgtccgaa tatctggaga    60
ctaaaaccct attcttcggc ccgtgatgaa tatagtgggg cggcagcatc tgtttttctg    120
gatgctaacg aaaacccgta taacctgccg cacaatcgct atccggatcc gatgcaacgg    180
gatctgaagt tggaattgtc caagataaaa aaagtagctc ctgcccatat ctttctggga    240
aatggcagtg atgaggctat tgatttggtg tttcgtgctt tctgtgagcc gggcagagac    300
aatgtagttg ctatcgatcc tacgtacggc atgtatcagg tttgcgccga tgtcaatgat    360
gtggaatacc gcaaagtgct gcttcacgat gattttcagt tttctgccga tgagttgttg    420
gcagttgcgg atgaacggac taagatgatt ttcctttgtt cacccaataa tccgacggga    480
aatgatctgc ttcggtctga gataataaag gtgatcaatg atttcgaagg attggtcatt    540
ctggacgagg cttataatga ttttttccgat gaaccctcat ttttgtcaga gttggataag    600
tatccgaatc tgattatctt acagactttc tcaaaagcgt ttggttgtgc agctattcgt    660
ttggggatgg ctttttgcctc cgaggggatt atcggtgttt tgaataaaat caagtatccg    720
tataatgtga atcagctgac tcagcaacaa gctatagaaa tgctccacaa atactacgag    780
atagaacgct gggtaaaaac attgaaggag gagaggggggt atctggaaga agctttcgtt    840
gagttgcctt gggtattaca ggtatttcca tcgaatgcca acttctttct ggcacgtgtg    900
accgatgctg tgaaaattta taattatctg gtgggagagg gtattattgt acgtaatcga    960
aattccatat cattgtgtgg caactgcctt cgtgtgactg taggtacacg ggctgagaat    1020
gccaaactga ttggagcact gaaaaaatat caatag                              1056
```

```
<210> 736
<211> 594
<212> DNA
<213> B.fragilis
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<400> 736
aatataaaac tgcggaataa tttgaattac aaagcattat ttcaaatagc aatgtcattg    60
atttcctctc cggccaaggc ctgggaggaa attcgtttag aggatagacg ggcagttctt    120
actgtttttg tctatcctat gattggttta tgtggtttat ccgtattcat tggtgctttg    180
tggactaatg gttggggagg accacaaagt ttccagttgg ccatgacgca gtgttgtgcg    240
gtggcggtag cttttgttcgg aggttatttt ctggcggctt atgctatcaa tcagatgggg    300
ataaaaatgt ttggtatgac caatgatatc cctttggcac agcagtttgc aggttatgcg    360
ttagttgtca cttttttgtt acatatagta accggattgc ttcctgattt cagtattatc    420
ggttggctgc tccaatttta tatcgtttat gtggtatggg aaggagcaag ggttgtgatg    480
ctggtagaag aaaagaatcg gttgcgttac accattttct cgtcgatttt gttaatacta    540
tgtccggcgg taatacaagt tgtgttcaac aagctaacag ctatattaaa ttaa          594
```

```
<210> 737
<211> 2175
<212> DNA
<213> B.fragilis
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<400> 737
tcgaatcttt gtattttttgt caaaattgaa ttgatacatt atattattaa atcgcacaaa    60
aacatgaaga agatgcttat ggctgccgga atggctgccg tgatgactgc ttgcggcaca    120
gccggacaga aagcagccac cgatgccgga aaccctttttc tggcagagta ttcaactcct    180
ttcggtgttc caccgttcga cctgattaaa gtagagcatt acaaagaagc tttcctgaaa    240
ggaatggaag aacagaaaaa agaaatagat gctattgtca atcagcgttc ggttcccgat    300
ttcgataata ccatcgctgc attcgatcag agtggagagt gttaaataa ggtgagtact    360
gtgtttagtg gtctgaacag ttgtaacacg aacgatgaaa tgcaggcttt taataaagag    420
```

```
attactccgt tgctttcggc acatcgggac gatattagtc tgaatccggc tcttttttgcc    480
cgtgtgaaag aagtttatga acgtcgggag aaactgggat tggataagga gcagaataag    540
ttactggaag aaacttacaa gaagtttgtt cgtggaggtg ccaatcttga ttctgtggat    600
caggcgaagt tgcgtcaact caatagtgag atttcgatgt tgcaattgac ttttggacag    660
aatctgctga aagaaaccaa cgcttttgag ttggtgattg ataagaagga agatctcgcc    720
ggattacccg aaagtcttgt ggcatccgca gccgaagcgg ctaaagggc aggtatggaa     780
gagaagtggc ttttcacttt gcacaatccg agtgtaatgc ccttcttgca atatgcagat    840
aatcgcgagt tgcgtgagaa aatcttttaaa ggatacatca atcgcggcaa caatggcaat   900
gaggccgata ataatgaaat cgtgaaaaaa ttggttgctt tgcgtctgga gaaagccaaa    960
ttgatgggat atgccgatta tgcttcttat attttggaag accgcatggc aaagaacgag   1020
gaaaatgtat atcgtttact gaatcagatc tggactcctg cagtggcgaa agccaaggag   1080
gaattgtctg atattcagtc tgaaataaag aaggaaggcg ctaactttac ccccgaagga   1140
tgggattggc gctattattt tgagaaagcg aagaaagcca agttcagttt agacgagaat   1200
gaagtgcgtc cttatcttga attgaataat gtgcgtgaag gtgctttcta tgtagctaac   1260
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cgtgacggta aacgtttggc gccggtagtt acgattgtgt gtaactttac caagccttct   1500
tcgggacagc ctgccctgct tagtgccgat gaggccggta ctttattcca tgaatttggt   1560
catgcactcc acaatttgtt taaagatgta cactttcatg ccgtatccgg tgtaccgcgt   1620
gattttgtgg aattaccttc tcaggttatg gagcattggg tattcgaacc ggaggtgctg   1680
aaaatatatg ccaaacatta tcggaccggt gaagtgattc ctgctgcatt gattgagaaa   1740
ctcgataaga gtggaaagta tggccagggg tttgccacaa ccgaatatct tgccgcttct   1800
ctgcttgata tggattacca tgtactgaaa gagattcccc ggaatatgga tgtcactgaa   1860
tttgaggctg ctgtgctgaa agagcgtggc ttgctaagtc agatacctcc tcgttatcgt   1920
actacatact tcaatcacat catgaacagc ggctatacgg ctggttatta cagttatatt   1980
tgggccgaag tgttagatag cgatgctttt gaagcatata aggaaaccgg tgatctgttt   2040
aatcaggaag tggcttcccg tttccgtcgt tatattctca ctcccggagg catcgacgat   2100
gcgatggata tgtataagaa ctttcggggt aaagaaccgg gcatagaacc tttgttgagg   2160
aataggggac tatag                                                    2175
```

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<210> 738
<211> 738
<212> DNA
<213> B.fragilis

<400> 738
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aggatgttaa taataggaat agcaggcgga acaggctcgg gaaagaccac cgtcgtacgg     180
aaaatcattg agagtctacc agctggtgaa gtagtattgc tacctcagga ttcatactat     240
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gcttttgaat ggagccttt gtctaaacat gttgccctcc ttaaagaagg caagtgtatc     360
gaacaaccca cctattctta tttgacttgt acccgccaac ccgaaacgat ccatattgaa     420
ccacgtgaag tggtcataat cgaaggtatc ctggctttat gtgacaaaaa gctgcgcaat    480
atgatggatc tgaaaatatt tgtagatgcc gatccggacg aacggttgat ccgtgtgatc    540
caacgtgacg tagtggaaag gggccgcact gcagaggctg taatggagcg atatacgcgt    600
gtgctgaaac ctatgcattt acagttcatc gaaccatgta aacgctacgc agatttgatt    660
gttcccgaag gagggagcaa tcaagtagcc atcaatatat tgaccatgta tataaaaaaa    720
cacatcggta ggccatga                                                   738
```

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<210> 739
<211> 1395
<212> DNA
<213> B.fragilis

<400> 739
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tgccgcaaca aacaagcagt agctatagag gagtcctctg cacacgatct ggaacaaatc    120
```

```
aaagatagcg gagaactcgt tgttctgact ctttatagtt ctacttctta tttcatctat    180
cgtgggcaag acatgggttt ccaatacgaa ctcagtgaac aatttgccaa aagtttagga    240
gtgaaattgc gaatagaagt agccaaaaac gtaccggaac tcatccgaaa gttactaaat    300
ggcgaaggag atattatcgc atacaatatt ccgattacta aagaattaaa agacagcctg    360
atctattgtg gcgaagaagt aatcacccac caggtaattg tccaacgaac caatgggaaa    420
acaaaaccgc taaaagatgt aaccgagttg gtcggaaaaa acatatatgt gaaaccgggc    480
aaatattacg aacgattggt taacttgaat aaagagctgg gaggaggcat tctgattcat    540
caagtaacca atgacagcat taccgccgag gatttgataa cccaagttgc acaaggtaaa    600
attccttata cagtggctga taatgatgtc gctaagttga atgcgactta ttatcctaat    660
ctgaatacca gtctgtctat cagttttgac caacgcgctt cctgggctgt acgtaaagat    720
tgtccgcaac tggcagcagc agcagacgaa tggcataaac agaatatgac ttcgccggca    780
tataccgcaa gtatgaaacg atattttgag atcagtaaag caatgcctca ttctcccatt    840
ttatccttaa aagagggtaa aatctctcat tatgacaact tattcaagaa atatgcgcaa    900
gagataggtt gggactggcg tctgttggca tccttggcct ataccgaatc gaacttcgat    960
acaactgccg tatcatgggc cggagcaaag ggactgatgc aattaatgcc tgccaccgcc   1020
cgtgcaatgg gggttccacc gggcaaagag caaaacccgg aagaaagtat caaagctgcg   1080
gtgaaataca ttgcagcgac agatcgcagc ctaagcatgg tgccggataa acaggaacgg   1140
attaagttta tactcgcttc atataatgcc gggctgggac atattttttga cgcaattgca   1200
ctggcagata aatacggtaa gaataaaacc gtatggacag acaatgtgga aaattacatc   1260
ctactaaaaa gcaatgaaga atatttcact gatccggtat gcaaaaacgg atatttccgt   1320
ggaatagaga cctacaattt cgtcagagac attaactcaa gatatgaatc atataagaag   1380
aaaataaaaa gttga                                                    1395
```

```
<210> 740
<211> 1431
<212> DNA
<213> B.fragilis

<400> 740
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ctgcaaaagg tgttgatgga tttcgcttgt ttgtggaaca atcccatttt cccgtttttgt    120
tttcccgcgg gtcctcattt aggtccttca gtagtgtcat ggcgtgcggg gagctgtcgc    180
gagttcgccg atttggtagt gtatgtaatg cgtgctttgg gtattccttg cgggacagac    240
tatatgccga tgcgtggaga taataacgtg ccgcatttct ggaattttac attggataaa    300
gatggaaaaa cgtatattac ggaatttccc gatcctaatt ggaaacgggc tgtgagtatg    360
tataatccta aggcaaaggt ataccggaat acgtatggct aaactggaa agatgtaaag    420
agacaacagg gaaaaatgat gcatccggcg tttcgaaaac ctctatatca ggatgtcacg    480
gctgtgtatg ccgacagctt gaatcgtgat ctggtagtgt cttctgatat tttgtgtaag    540
gaagttcaca aaggagatat tgtctatttt tgcctttcca caaggatgga ttgggtacct    600
atagcatgga ctgttttttga agaagactca ttgcgctttc aagatacgga aggtagtgtg    660
attggttgtt tggctacatg gaatggaaaa cgtcttgtga tgcagtccga gccgtttacc    720
tatgataaaa tgtcaggaac gattgctttg ctcactcctc aaagtgaaaa agaagatata    780
accttgtatt ttaagtttcc gctgttctgc gacttaggta tccttcgtat gcccggagga    840
gttttgaag gaagtaatga ttcgcagttt cgctctgcag atacattgta ttatgtaaaa    900
caatggcctt tccgcttgaa caacactatt tttccggaga agaaaaagtc ttatcgctat    960
gttcggtaca aggggccgaa ggggagttat tgcaatatag cagagatggc tttctttgaa   1020
gatacctcgg atacgttggc gttgaaaggg cggatcatcg gaactccggg ttgttttcag   1080
aaagacggct cgcatgatta ttacaaagta tatgatggca atccctatac ttatatggat   1140
tataagactc ctgatgaggg gtgggtcgga ttagattttg gcattcctcg ccggataaag   1200
aaatttactt atattcctcg taattcggat aattttatcc ataaaggaga tgtatatgaa   1260
ttattctatt ggcatgacaa gaaatggaat tcgttaggtc ggcaagtggc aaaagcagat   1320
tctttaaatt atgtaattcc gaaaggggta gccttatttt taaagaatca tacggaggga   1380
aaggacgaac ggatctttaa gaagaccgat gggagacaac agttttggta g             1431
```

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<210> 741
<211> 720
<212> DNA
<213> B.fragilis
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<400> 741

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gaaaggaaaa gtatgaaaac agtagtagac aaagcctctt caagggggtta tttcaatcat    60
ggttggctga aaacccacca tacatttagt tttgcaaact attataaccc gtcaagaatg   120
catttcggcg tattgagggt actgaatgat gatagcgttg accctgaaat gggattcgat   180
acacaccctc accagaatat ggaagtcatt tctatccccc tgaagggggta tctgagacat   240
ggcgacagcg taaaaaacac ccggacaatc acacccggcg atatccaggt tatgagtacg   300
gggaaaggta tcttccacag tgaatataat ggaagtgaca aagagcaatt ggaatttttg   360
caaatatggg tattcccgag aattgaaaat acagagccgg aatataacaa ctacgatatt   420
cgtcctttac tgaaaagaaa cgaacttgct ctaattattt caccggacgg taaagtaccc   480
gcttccatta agcaagatgc atggtttttct atgggaacat ttgacgcagg aaagagtttc   540
gaatacaagt tgcatcagga aggtaacgga gtttatcttt ttatcatcga aggagatgtg   600
gaagttgcag gcaaccgatt gtcacgacgt gacggcatcg gtctttggga tacaaagagc   660
tttaaagtgg aaataaccca agaagcgacc ttattgctaa tggaagtacc aatgcgataa   720
```

<210> 742
<211> 1482
<212> DNA
<213> B.fragilis

<400> 742

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gtatttcgga ggaagctaca aagtacagac aaatccggac ggaaagccgg ccatcctctt    60
cacgtttccc tcaggaagaa attgacttct tcccctatcc gctcgtctac ttctacagaa   120
agttgtatct ttgcaacctg caaacttaaa cccttctttta tgtataccaa caaacagatc   180
tggagtgtca gttacccgat tctcctgagc ttgcttgcgc aaaatgtcat caacgtcacc   240
gacactgcct ttctgggacg tgtcagtgag atagccctcg gtgcttctgc catgggtggg   300
cttttctata tttgtatttt caccattgcc ttcggattca gcaccggttc ccagatcgtc   360
attgcccgcc gcaacggtga agcacgttac ggcgatgtag gtccggtcat gattcaggga   420
gtcttgttcc tgttggtcat ggctctcctg ctcttcggat tcaccaaagc gttcggcgga   480
aacatcatgc gcctgctggt ctcttccgaa agcatttatg atgccacgat ggagtttctc   540
gactggcgca tcttcgggtt cttcttctca tttgtcaacg tgatgttccg ggcactctac   600
atcggaatca cccgcaccaa ggtgctcacc atcaatgcag tggttatggc gctgaccaat   660
gtggtactgg actatgccct gatattcgga cacttcgggc ttccggaaat gggcatcaaa   720
ggagcagcca ttgcttccgt aatcgccgaa gcggcttctc tgctcttttt cctgatttat   780
acgtacatca ccgtcaacct gaaaaagtat ggtctcaacc gcttgcggtc gttcgacccg   840
gtttttgttga tgcgcattct cagtatatcg tgcttcacca tgcttcagta tttcctgtcg   900
atggccacct ggtttgtttt ctttgtggca gtggagaggt tgggacagcg cgaactcgct   960
attgccaaca tcgtgagaag catctacatc gttatgctga ttccggtaaa tgcactggcc  1020
accacgacca acagcctggt gagcaacgcc atcggcgcgg gaggcatcaa ctacgtgatg  1080
ccgttgataa acaaaatcgg gcgcttctct ttcctgatca tgctgggact ggtcatcata  1140
accgccctgt cccacaagc attgctctcg gtatacacca cgaaacggc attgatcaat  1200
gaatcggtat catcggtata tgtcatctgc gtggccatgc tgattgcctc tgttgctaac  1260
gtcgtcttca acggaatatc gggtacaggc aatactcaag cagccctgat gctcgaagcc  1320
atcacgattg caatctacgg atcgtacatc attttcatcg gaatgtgggt gaaagctccc  1380
atcgaatggt gctttacgat tgagattctg tactatacac tgttgctcgc cacaagctat  1440
atttatttca aaaaagcaaa atggcagaac aaaaagatat aa  1482
```

<210> 743
<211> 1269
<212> DNA
<213> B.fragilis

<400> 743

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tatatgacag gagtagcgga aaagaaaaaa agaatgataa agatttacct attatgggtg    60
ctgttagtcg gtagcttgtg ctgttcttgt acaggaaata aacgattgga atatgcgttg   120
gagtttgccg gggagaatag gggagagctt gaaaaagttt tggaacacta taatgatagc   180
ggactgaaac aggatgccgc acgctttttg attgaaaata tgccccgcta tttttagttat   240
gaaggatggc aattggatac gttaaaagca attcatgcag ccacagaaca tacggatgga   300
tgggtgaata aaaaagatcg caaaaaatgg gaacattttt cttttcggac tttaaagaaa   360
gtttatgatg ctaaagtgat taaagctgag ttcttgattc atcacataga tcaagccttt   420
```

```
gaagtttttg aaaaaagatc ctggaataaa tatttgccat ttgatgattt ctgtgaattg    480
attttgccat atcggattgg tgatgaaccc ttggaggaat ggcgtggttg gtatagggag    540
cgttatgaat ctatattgga ttcgctctat caagggacag atgtggtaga agccaccgat    600
cgtttagggg cttatttgcg tcaggaaaaa gacttcaggt atagtgttga gctggactta    660
ccccatttag gtgcaggttt tttgctagct aacagggttg gaagctgtga ggcgtcttgt    720
gattttacgg tctatgtgtt acgtgcgctt ggtattcccg ctgcaacgga tatttatcat    780
tatggacccg gtaagggagc cggtcatgtc tggaatgtat tgagggatac aaccggtggc    840
tatgttcctt tctggtttat tcagactaaa gtggagcggg gcggaagtga taaacgagaa    900
aaagggaagg tatacaggcg gtgttttgga gcacagcagg agaaagtatc aggtatccgc    960
cgcgatcggt ctgttccgtt tccgctgaaa gatccatatt taaaagatgt tacaagtgac   1020
tatttcccgg caaatcaggt tacaatagaa attgatcctc aggttgataa aaagtatatc   1080
tgcctgggtg tgtttacatt ggaaggatgt atgcccatag atataactgt gcagaaagga   1140
aataaagcaa cctttatgaa tgtagaaccc ggaattttgt ttcaaccgct atatgataac   1200
gggatgaagt gggtggcagc cggatacccт ttccagtgta gacgaaaagg gagaggtgaa   1260
gtatcataa                                                           1269
```

```
<210> 744
<211> 504
<212> DNA
<213> B.fragilis
```

```
<400> 744
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tttggttgtg cccctaacaa tgaagccggt gtgaaaatgg aattttatga ggataacgat    120
gaagtgatta gcatctggcg tccccgtccc gaataccagg gatggattga tacactacat    180
ggaggtatcc aggccgtact tttggatgaa atctgtgcat gggttattct ccggaagtta    240
cagactacgg gggtgacatc aaaaatggag acacgttatc gtaagtcgat cagtactaat    300
gattcacatg tagtgctcaa agcgcatatt aaagaagtga agcgtaacat tgtgataatt    360
gaggcacgtc tttataataa agatgaggaa ttgtgtacag aagctctctg cacttacttc    420
acttttccga aggagaaagc cagagaagag atgcattttt tgtcatgcga agtagaagat    480
gaagagattc ttcctttaat ttga                                           504
```

```
<210> 745
<211> 1017
<212> DNA
<213> B.fragilis
```

```
<400> 745
cccatatttta taatgaaaaa gattatttta agcagcgtat tattgctatc cggcttcttt     60
atccaagcgc aacaagctcc cgagaaaatc agctttaatt ccaatggtga atttaagata    120
gcacaattta ccgatatgca cttgggacat gatcaggaga aagaccgaat agtgggagat    180
atgatcaaag aagtacttga ttctgaaaag cctgacctcg tgatatttac aggagacaat    240
actactatgg atgaagtccg gcaagcttgg gaagccatat ctgccgaact gtcggcccgc    300
cggatccctt ggacagccgt attgggaaat catgatgacg aatatgccgt aaagcgtgat    360
gaaatcattc gtatcatccg ggaacaaccg tattgtatga tgaaacaagt ggcagaagga    420
ataaaaggag aaggtaacca tattctccct atttacagtt cgaaagacgg aaataaaaca    480
gccgcattgc tttattgcct ggacacaaat gcttattcga agataaaaac agtaaaagga    540
tatgactgga tcggacgatc tcaaatagac tggtactccc gcgaaagccg gaagtacaca    600
gaacggaatg agggacaacc attacctgca ttgaccttcc tccatattcc gctaccggag    660
tacacccaag catgggaatc gttcgaaacc aaacgttacg gagaccgtaa cgaaaaagaa    720
tgcagtcccc atataaacag cggtatgttt gccaatatgc tggaatgcgg tgatgttatg    780
ggtgtttttg ccggacacga ccacgtaaac gattacatcg ctactctcta taacatcgct    840
ttaggatatg gacgagcttc gggcggaaaa aatacttacg gagataaaac accaggcagt    900
cgtatcatcg tattgaaaga aggtaaacgt gaattcgata cttggcttcg ggaaaaagga    960
aatatggcaa aactgaatgt atgtacatat cccggctctt ttgtaaaaga gaaatag      1017
```

```
<210> 746
<211> 3165
<212> DNA
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<213> B.fragilis

<400> 746
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attggtgcca ctatcatggt gaaaaactca tcaaacggaa ctgtcaccga tatagatggt  180
cgttacagca tcgaagttcc taaaaacgca acactactat tctctttcgt aggttacagc  240
acagtagaga aagaggtagg taacaacact gtaatcaatg ttgaactgtc cgatgacatt  300
caggccatcg acgaggtagt ggtcactgca atcggtatca agcagcaaaa gaagaagatc  360
ggttacacaa cccaacaaat caacagtgag gtattgaatg ccactcccag tctgaatgtg  420
ggctcggccc tttccggaca agtagccggt ctgttggtag ccaaccctac cggtattttc  480
caggcaccga gtttcaaact cgcgcggcaac gcaccattgg ttgtactgga cggagttccg  540
gtagaaaccg actttttcga catctcaagt gagaatattg aaagtgtcaa tgtactaaaa  600
ggtacggcag cctcagcttt atacggttca cgcgggaaaa acggagcaat tctgatcacc  660
agtaaaacgg ccaaaaaaga aggcttggaa atcaacttct ctaccaacaa catgatcaca  720
gccggctttg cagtgcttcc cgagacacaa catcaatacg gtagcggttc aaatggtaaa  780
tatgaattct gggacggtgc agatggcggc atttcggacg gtgacatgac ttggggaccc  840
aaattaaatg taggaaccaa agtagctcag tggaacagcc cgatcaggga taaagtgact  900
ggaaaagaga ttccctggtg gggagatgta aaaggtactc agtatgatga caaatcgcgc  960
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ggactagtaa ccaacaataa tatctcaata gcttataaag gagaaaaagc acgctacttc 1080
gtcaccggac aatatgctta ccaaaaggga caggtgcctt ctactgaaat gcacagtgga 1140
ggtatcaact tcaactctac ctttgatctg gctaaaaact tgcagctgga tgccaatctg 1200
gcctacaaca aaatagttgc cccgagttat ccgcgctacg gatacggacc taaaaaccac 1260
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aatccttact ttgcagccga agagctccag caatccgaaa gtcgggatgt ggtgaacggg 1440
caagtccgcc tgaattatca aatcctcccc aatctgaaca tacagggacg tgccgcctta 1500
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tcccgggaag gtgactacaa agtatggaat gaccgtcaaa ctaatgtaga cgctgatgta 1620
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aaatcaatcc gtagtatttta tggatcaatc aaccttgatc tttacaaata tgcctatctg 1860
acgttgacag gacgtaatga ctggtcatct actctggcaa aaggcagtaa ctcttacttc 1920
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tcttctctgg tcaactacta cattaaacct cagaaaacga catcctggga agccggattg 2160
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gaatcagtgg agtacaggga tgcacaatat gccgtcggac acccgatata tgtacccaat 2760
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acacgcacct acaaacgtaa cacgacagcg gtcgattggc aacaatggtg ccagaactat 2880
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caaagccccg tgaaaggact tacagctaca gtgtttggca acaacctagc tgtctggaaa 3060
aaagtcccct ttgtcgatcc ggactacacc ggagacagca acgacgagg tgccaacgat 3120
ccaaccgcac gctatatcgg catgggcgtc aacataaaat tctaa             3165
```

<210> 747
<211> 1251

<212> DNA
<213> B.fragilis

<400> 747
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cggctttatc aagaaaatcc caaacatgtg atgagcgatg aactgcttga aaagtttatc   180
gagcaataca tcaattcgca aaccatgccg caagtactct tcacctggca cggaggagag   240
acattgatgc gtccactctc tttctacaaa aaagcaatgg agttgcagaa gaaatatgcc   300
cgtggaagaa gcatagacaa ctgcatacag actaacggaa ccctgttgac cgacgagtgg   360
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ttcaagcatg tggctcctta tatggatttc atgaaaaacg aattgatgaa ccagcggccg  1200
ccggccaatg tgatggacgc tatcaaagaa aacaaattga tcatagatta a           1251
```

<210> 748
<211> 615
<212> DNA
<213> B.fragilis

<400> 748
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gcgttggata atattttttgc acgtaaaagt gtgcgggctt atttagacaa ggaagtagaa   180
aaagaaaaaa tagattggat gctacgtgcc ggtatggctg caccatccgg aaaagatatt   240
cgtccgtggg agtttgtatt ggtcaccgac cgggttgctc ttgattcgat ggccgctgct   300
ttaccttatg caaagatgct gactcaagct cgctatgcca ttgttgtatg tggagatgta   360
gctcaatctt cctattggta tctggattgt tcggctgctg cacagaatat attattggct   420
gccgaagcac aggggctggg tgcggtatgg acagctgctt atccttatga agaccgtatc   480
agggttgttc gtaaatatac ggagcttccg gggaatatag tgcccctgtg tgtgattccg   540
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tacgataagt tttaa                                                    615
```

<210> 749
<211> 849
<212> DNA
<213> B.fragilis

<400> 749
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tctaaacaag ttggagaggc aattgttcgt ggaaccggaa taacaaatgt gataaacacg   120
aatttaacac aacaggcaac tcaggattta gtgattgccg aatctgcatt agctattatt   180
gtcgtgccgg tatatggagg tcgtgtagcc cctttggcca tggatcgtct ggcaagtgtg   240
cgcggaagta atactccggc ggttatcgtg gtggtatacg gtaaccgtgc ttacgaaaaa   300
tcgttgatgg aacttgatta ttgggctatt caacagggt ttaaagtgat tgccggtgct    360
actttcatag gagaacactc ttatagtaca gaaaaatatc ccgtagctgc cggacgtcct   420
gacgaacgtg accttgctgt ggcagccgat tttggaaagc agatttcaga taaaatagca   480
tctgctaccg aaccggaaaa attatatgcg gtcgatgtcc gtaaaatccg gcgtccgcgt   540
```

```
cagccttttt ttccattgtt tcgctttttg cggaaagtga ttgccttgcg taaaagtgga      600
gttcccttc cccgtactcc ttgggtggaa gatgaatctt tgtgtactca ctgcggtacg      660
tgtgcgaaaa tgtgtcctgt aagcgccata gccaaaggtg acgagttgaa tacggatgcc      720
gaacgctgca ttaaatgttg tgcctgtgta aagggatgcc cacagaaagc cagagtatat      780
gatacccegt ttgccgtact actgtcgcaa tgttttgtta agcagaaaga tccctgtacg      840
ttggtttaa                                                             849
```

```
<210> 750
<211> 906
<212> DNA
<213> B.fragilis
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<400> 750
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gtgttttgcc tgacttcttt caaaattccc tccaattcaa tggaaccggc attgctttcg      180
ggagacaaaa tactggtgga taaatggacc ggtggggcac gtctgtttaa tatctttgcg      240
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gacgatgtgc ttgtttttaa tttcccttat caggatggga gcgacagcat cggatttgat      360
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aagggctatt atcatataaa aggaatcaca gacagtgtgg ggaatgtgca ggcgcaacat      480
cggattgcac gtgtcagaag ggaagattca catgggatcg tgatggatgc ttttccgtgg      540
gacggacgtc tgggatggac cattcaggaa ttcggacctc ttccggtacc ggccaaaggg      600
caggtggtga aaatagatac attgtcttgt ttgctttacg gaagattgat ccattgggag      660
cagaagaaga gactgcggca aaaaggagag gcggtatgtc tgggcgatag tgcaataacg      720
gaatataagt tcacagagaa ttactatttc gtatcgggag ataatatgga aaattccaag      780
gattcacgtt attggggaat gttgcccgaa tcatatattg taggtagggc atttacaata      840
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aaatga                                                                906
```

```
<210> 751
<211> 1278
<212> DNA
<213> B.fragilis
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<220>
<221> unsure
<222> (524),(1246),(1269),(1270),(1271)
<223> Identity of nucleotide sequences at the above locations are unknown.
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aaggcactgg gacagaacgt gctcacagcc gtaaaaccga gccagttgat ggtgaagatt      240
gttcatgacg aactgacccca gctgatgggt ggagaaactg tcgaaatcga caccaaaggt      300
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ctcgatgcca tcgaccagtt ccaccctgcc cgtatggccg accgtatcct gggtatgggt      900
gacatcgttt cgttggtgga acgcgcacag gaacaatatg acgaagaaga agctaaacgc      960
ctccaaaaga agattgccaa gaaccagttc gacttcaacg acttcctcag ccagatgtcc     1020
cagattaaga aaaatgggtaa tctgaaagag ctcgcttcaa tgattccggg tgtgggcaag     1080
```

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gccatcaaag atatcgatat cgacgacaac gctttcaaaa gcatcgaagc catcatctac      1140
tccatgactc cggaggaacg cagcaatccg ggcatcctga acggttcgcg ccgtacacgt      1200
atcgccaaag gtagcggtac gactagtctt caccgcgggt tccagnggcg ctctattggc      1260
atcagtttnn nagatcac                                                    1278


<210> 752
<211> 651
<212> DNA
<213> B.fragilis

<400> 752
aaaagataca taattatgaa aaagttacag tttttagtgt gtttcctgct tttgtcggtg      60
gcaagttatg ctgccgagcg gacgattcag ttacctaagc ccgacatgaa tcgtgccgga      120
ctgctaatga aagcgttatc cgaacgtcat tctactcgtg aatatgcttc gaaggctttg      180
agtaataccg atttatccga tttactctgg gctgccaatg gcattaaccg gtcatctgaa      240
ggcaaacgta cagctccgtc agccatgaat cgtcaggata tcgacatata tgtggtgctt      300
ccgcaaggaa cttacctgta tgatgctaaa gggcataagc tcaatctgat ttctgaggga      360
gatcaccgtt ctgcggttgc tggcggtcag gcctttgtca acaatgcgcc ggtatcgttg      420
gtgctggtca gtgatctgtc taagctgggt gatgcgaaga gtaatcatgt tcaattgatg      480
ggagctatgg atgcagggat tgtttcgcaa aacatctcgt tgttctgttc ggctgcacgt      540
ctggccacag tcccgcgtgc atcgatggat ctggtacggc tcaaagctgc tttgaaatta      600
aaggatactc aaatgccgat gatgaatcat ccggttggat attttaaatg a               651


<210> 753
<211> 600
<212> DNA
<213> B.fragilis

<400> 753
aggaatttaa tacgtacata ttattgtcat aagaaacggc atacgaaagc aattttgtat      60
gcccgttttc tgtttaatca aaaaaatatt cgtattttgt ttgcgaaaat aaaaagaact      120
ctttatcttt gcatcagatt taaaatggta atgaatacat ttttggaaag aagaaagaaa      180
atggaatcat acaaccgatt actagagcac aacatcaaac cgtccatgca gcgaattgct      240
atcatgaatt atttgatgga acataagaca cacccatcgg ctgatgaaat atatacggag      300
ttatcttcct ctatgccaac actttcaaag actacagtct ataatacctt gaggctgttt      360
tctgagcagg gagcggcaca aatgcttact attgacgagc ggaacaccaa ttttgatgcg      420
gacacttcac aacatgccca tttttctgtgc aagcgttgcg ggcgtattta tgatttgaaa      480
tgccaggttg agatgaaaca agtggaaggt cttcaaatgg atggacatga agtaagcgaa      540
gtgcactact attataaagg tgtttgtaag aaatgtttaa ataatatacg tattgactaa      600


<210> 754
<211> 1023
<212> DNA
<213> B.fragilis

<400> 754
acaaagttaa tgaaacaaat caatgcagta attacaggag ttggaggata tgtgcccgat      60
tatatcctga ctaatgatga gatatccaga attgtagata ccaccgatga atggatcatg      120
ggacgtatcg gaatcaaaga aagacgcatc ctgaatgaag aaggactcgg cacctcatac      180
atggcacgaa aagctgtcaa acaactgatg caacgtactc aaagtaatcc ggatgatatt      240
gacctggtaa ttgtagctac caccactccc gattatcggc ttccttcaac ggcttccatt      300
ttatgcgaaa gagtggggtt gaaaaatgca tttgccttcg acatgcaagc ggtctgcagc      360
ggtttcttat atgcattaga aaccgggggct aactttatcc gttcgggaaa atacaaaaaa      420
gtcattattg ttggtgccga taaaatgtcg tctgtgatag actataccga tcgtgccacc      480
tgtcctattt tcgctgatgg tgcagcagct ttcttgttgg aacccacaac agatcattta      540
ggagttatcg attccgtttt aagaacagac ggcaaaggac ttccttttttt acacatgaaa      600
gccggtggtt cagtttgttc cccttcttat tttacagttg acaaccacat gcattacctt      660
caccaagaag gacgtacagt atttaaatat gctgtagcca atatgtcaga tgcatgtgag      720
tcgatcatcg aaagaaacca actgacaaaa gatgaaatag actgggtcgt tcctcaccag      780
```

```
gccaatcaac gtatcatcag tgctgttgcc caacgtctgg atgtaccatt agaaaaggtt    840
atgatcaata tcgaacacta cggcaatacc agtgcaggta cgcttccatt atgcatttgg    900
gatttcgaaa ataaactcaa aaaaggtgat aatttgattt tcaccgcttt cggagccgga    960
tttgcctggg gagctgttta cgttaaatgg ggatatgatg gcaagacaaa taacgcatgt   1020
tag                                                                  1023
```

<210> 755
<211> 864
<212> DNA
<213> B.fragilis

<400> 755
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gatattgtaa ttatgttaag aatcgcagta caagccaaag ggcgtctttt tgaagaaacg     60
atggcccttc ttgaagaatc agacatcaaa ctgagcacaa ccaaacgtac tttactcgta    120
caatcgtcca actttccggt tgaggtactt tttctccgtg acgatgatat tccccaatct    180
gtagctacag gagttgccga cttgggtata gtaggagaaa acgaatttgt agagaggcag    240
gaagatgccg aaatcattaa gcgtctcggg ttcagcaaat gccgtttgtc tttggctatg    300
cccaaagaca ttgaatatcc cggtttgagt tggtttaacg gaaagaagat agctacttcc    360
tatcccggaa ttttagatgc ttttatgaaa agtaacgggg tgaaggctga agtgcatgtc    420
attaccggtt ctgtagaagt tgctcccggc atcggattgg cggatgctat tttcgatatt    480
gtcagttccg gttctactct agtcagcaat cgcctgaaag aagtggaggt cgtaatgaga    540
tcagaagctt tgctgatagg caacaagaat atgagtaagg agaaaaaaga gatattggac    600
gaattgcttt tccgcatgga tgctgtgaaa actgctgaag ataaaaagta cgtactgatg    660
aatgctccta aagataaaact ggaagatatt attgctgtgc taccgggtat gaagagtcct    720
actgtgatgc cgttggcaca agatggttgg tgctctgtac atacagtgct cgatgagaaa    780
cggttttggg agatcatagg taagctgaaa gcgctgggag cggaaggtat tttggtgttg    840
cctattgaga agatgattat atag                                           864
```

<210> 756
<211> 462
<212> DNA
<213> B.fragilis

<400> 756
```
gaaaataaaa tgaaactggc tcctataaat ataaagaata aacgtgctac tttcgactat     60
gagttgatcg atacttatac agcaggtatt gtgttgaccg ggacggagat taagtccatc    120
cgtctgggta aggcaagctt ggtagatacg ttttgctatt ttgcgaaagg cgagttgtgg    180
gtgaagaata tgcacattgc cgaatatttt tatggctcgt ataataatca tgcggcccga    240
cgtgaccgta agttgctatt gagcaaaaag gagctgaata aattggaaag agggacgaaa    300
gacgccggat tcaccattgt ccctgtgcgt ttgtttatta atgaaagagg tttggccaaa    360
gtggttgtag ctttggctaa aggtaaaaag caatatgata aacgggaggc tttgaaagaa    420
aaagacgacc gtcgtgatat ggacaggatg tttaaacgat ga                       462
```

<210> 757
<211> 477
<212> DNA
<213> B.fragilis

<400> 757
```
aaacaaagaa tgaagaaagt attatcatta gtagctttgg ccatgatcag caccattatg     60
tttgctgtaa acgatggagt caaagcagat caaaacaaaa aagaggcaaa gagcggtgag    120
gttatcgtga tgaataaaga gatgtttatc aacgatgtct ttgattacca gaattcaaaa    180
gagtggaaat ataaaggtga taaacctgcc attatcgacc tgtatgcaga ttggtgcggt    240
ccctgccgca tgacagcccc gattatgaaa tcgcttgcta aagaatatga cggaaaaatc    300
gtaatatata aggtgaacgt ggataaagaa aaggaactgg ctgcactatt caatgcaaca    360
agtattcccc tctttgtatt tatcccaatg gagggcgaac cccaactgtt tcgtggagca    420
gcagataaag ccacttataa aaaagcaatc gacgagttcc tgttgaaaca gaaatag       477
```

<210> 758

<211> 579
<212> DNA
<213> B.fragilis

<400> 758
```
tttaccccga ttatgaaatg gatgattttg attttttga attttttgtt ttgtgcccaa      60
cttgttgggc aagtatcacg acccgataga aaccttttgc gtggtgagac gtatgtgatt     120
gaggtgccga aaggatggaa acgtccttct gctgtgcatt cttgcaatga tgaacctttg     180
aaacgcgtta atgggaaata cgaaactaca aagtttatga gagtatattc aaaacgtaaa     240
gatcgttgtg gtgcggtatt gaccattatg gaaatacaaa aatgtgcatc tttttcaggaa    300
atatttaagg aagacagtat ttgggcatcg acggatacta cgcaggtgaa ggtgatatat     360
aagtctgtca atagtaagaa tggggttaaa aagatggctt ttacttcgta taaggcagag     420
cgtcatccgg aaactaacga attatctgct ttgcaaaagg ctgaatggta tttgcagggg     480
cgtgaaaatg tatattatat cagttttacg tcttgctcat tgtttttaga actgctaccg     540
cagattaaag atattgtggc gtcgttaaag gaactttaa                            579
```

<210> 759
<211> 1458
<212> DNA
<213> B.fragilis

<400> 759
```
atgcattgga taatggaaaa tggtgtaatg atgcagtatt ttgaatggaa tctgccaaat      60
gacggaaatt tatggaaaca attaaaagaa gatgcgtcac atttacatga gattggtgtg     120
acagcagtat ggattccccc cgcttacaaa gccgacgaac aacaagacga aggttatgca     180
acctacgatt tgtatgatct cggcgagttc gatcaaaaag gaaccgtaag aacgaaatat     240
ggtacgaaag aagaactgaa agaaatgatc gatgaattac ataaaaatca tatttccgtt     300
tatctggatg tagtactgaa tcataaggca ggaggtgatt tcactgaaaa gttcatagtt     360
gtagaagtcg atcccaatga tagaacccaa gcattaggaa aaccgttcga aatacagggc     420
tggaccggat acagcttcca tggacgtaag gataaatatt cagacttcaa atggcattgg     480
tatcattttt caggaaccgg ttttgacgat gccaaaaagc ggagtggcat cttccagata     540
cagggtgaag gcaaagcgtg gagcgaaggg gttgacaatg aaaatggcaa ctacgatttc     600
ttattatgca atgatataga cctggatcat cctgaagtag tcaccgaatt gaatcgttgg     660
ggaaaatggg tttccaaaga gctgaacctc gacggaatgc gtctggatgc catcaaacac     720
atgaaagaca agttcattgc acaattcctg gatgcggtaa gaagcgaaag aggagacaaa     780
ttctacgctg ttggcgaata ttggaatggt gatttgaaca cactcgatgc atacataaaa     840
tccgtgggtc acaaagtcaa cctatttgat gttccattac attataattt attccaagca     900
tcacaagaag gcaagaatta tgatctgcag aatatcctaa aaaacacatt agtcgagcac     960
tactgtgatc tggcagtcac ttttgtcgac aatcacgatt cgcaatcagg cagttccttg    1020
gaatcacaaa tagaagactg gttcaaacca ttggcctatg gtctgatatt attaatgaaa    1080
gacggttatc cttgtttgtt ctacggagat tattatggtg tcaaaggaga aaactcacct    1140
catcccaaa tcattaatat tcttctggat accagaagaa aatatgctta tggcgatcag     1200
attgagtatt tcgatcatcc ttccgccatc ggctttattc gtacgggaga tgaagaacat    1260
gtcggttccg gtttagtctt tttaatgtct aatgatgaag ccggcagtaa aaagatggat    1320
ttgggcgaag aacataaagg tgaaatatgg catgaaataa ccggaaatat tcagcaagaa    1380
atcacattag acgaaaaagg aagtggagaa ttttctgtta atacccgtaa tattgctgtt    1440
tggataaaaa agaattaa                                                   1458
```

<210> 760
<211> 477
<212> DNA
<213> B.fragilis

<400> 760
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atgcataact tttgttttttt tcgttacgca aagatcccgt ttccggatta caggaggatg      60
aatgtaaggt tactatatga tgaacaaaat cgggacttct ctgttattat aataaaacaa     120
ataactatat ttgcccccctg taaacgaggg ctctatattt atcaaaagaa aggaaaaatt     180
atggaaaaat ttgaagattt aatacagtca caaagtcccg ttttagtaga ttttttttcgca    240
gaatggtgcg gcccctgtaa agcaatgaaa ccgattcttg aggatctgaa acagcaggta     300
```

```
ggcgagaaag cccgtattgt aaaaatcgat gtggacacac acgaagaact agctgtaaaa     360
tacagaattc aggctgtgcc gactttttatc cttttcaaaa agggagaagc tgtctggcgc     420
cattccggta tgattcaagc cagcgaactg aaaggagtta ttgaacaata cacataa        477
```

<210> 761
<211> 1014
<212> DNA
<213> B.fragilis

<400> 761

```
ataatgaatg ttagatgttt tttatggggg attttgttta taactgtatc aagttgtata     60
gaatctgata ggattatgca ttatgctcaa tttgagcata ccataaattt gaaatccgat     120
agaatacagg ttccttcggt gttattgtat ccacggagtt tagttttatg tgatagtaat     180
ctgatagtat tcaatgaaaa aatggatact atgtttcaat gcttccattt gccggatttg     240
acttttcaat atggtttttgg aacacagggg cagggaccga atgatttcgt tctcccttct     300
attacccctg tgaaatatca aaagaacggt tttgtcatgt tagacggaat taacctgaaa     360
catattagtg tcaagaaaga caaagctatc gtacagactt cgactttaaa ttatggattt     420
aattgtttta atgacttgat aagtatttcc gatagcagtt attgttgtaa tggaggtttt     480
gagaatgaaa aagaatttag gtttctttat cctgacggaa atcatgaatc atggggagaa     540
tatcctgaaa cagaggaacg tttcggatct gtttttggaca ggaatcaggc gtatataaag     600
atgaccgtcg ctaagcctga taagagttgt tttgtttcgt tctaccaaca tatacgccgt     660
ttcagaattt atggtaaaga tggagaatta aaaagagatg ttatttttaga tattcttccc     720
gggcaagaac gtcctgaagt ggatgattat ttgagattca tacatcctat aagtgtctat     780
gcaacggaca gttatattta tacattaaat ctggatatga caacagagga aattgagaat     840
cggaaaacta ctcctaacat ccaagtattc gattgggaag gaaagccact tacacaatat     900
aaactcgatt gtttttattaa cacttttgtc gttgatgaag ttgcaaataa gatttatgga     960
gcttttgttg aagacgaaga tcatatttat gtatttaatt taccccgatt atga          1014
```

<210> 762
<211> 1050
<212> DNA
<213> B.fragilis

<400> 762

```
aaaggatgtg tcagttgtaa tatttgtgac acatctttt gtaactttat taaagttatg     60
cataagataa ttctatatat tatttctgtt ttaacagtgt ttacttcttg cacaactact     120
gatgtacctg ataaggtgag tttacaaccc caggtaatga atgatagtct tttgacaact     180
atgcctggtg atttattgct gattgacgat tatttagttt ggtctgatcc tttctctgat     240
aacaaatttc tgcatgtaca tcgttcttcc gatggaaaat atatcggttc tatggggcaa     300
aaaggagaag gtccacagga atttgtaagt cctttaatca atcgttttttc cattaatcgc     360
tgtattgctg ctcatgatgc taacgggaaa accagaggct atttatctat tgacagttta     420
attgtcggaa aagaaccttt tatgtcttta tcagatttttg atcggaatat acgaatggct     480
aaattggacg aacaactgta tctgactgaa accgaaaatg gtgagaacga ttattttaaa     540
gtgagttcaa atgggaaaaa atctacattt ggggtttatc cgattcgtga agtgaaacac     600
catatgggta catataaaac ttacgataaa gatcgtggac tccttgcttt tggtcctttt     660
aatttttctt atttggcttt gtataaaaag gaagggggata attttaagtt attatgggaa     720
cgcatgcctg aaaaagaaaa ctattctgtt gttgatgggg cgattaggtt tgatcgtagc     780
gtgatgggag tgagagatat atgcatgact aaagattata ttgttactct ggagcgtgac     840
cggaagttg atccgttgga tgaaaggact gtcggacgta atgcaagtaa atgtccccgt     900
acggtttttg tgtatgatta tgatggtaaa ttactgaaaa ttgtaaattt gggcatgcct     960
gtaatgcgca ttgctgctga cggacgaagt aatgctctgt atgtgatagg agttaatcct     1020
gattttgcat tggcgaaata tgatttatag                                       1050
```

<210> 763
<211> 1797
<212> DNA
<213> B.fragilis

<400> 763

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gttttttttcg tattttttgcg aaaaaactta atgaaaatga acacgcactc actatttggt      60
tacctttttta ttgctttatt tagtcttttta gttgtatcat gttattcgac gccggatgga     120
gtcatgtcat ctctgtctca agctgagaaa ataatggaat ctcgcccgga tagtgcaatg     180
gctattttgc aacatatccc aactccggaa actcttcatg gtaaagcgca ggcggactat     240
agcctattga tgacacaggc tatggataaa aactacataa attttacttc agattcgctg     300
attaaatttg ctgttggtta ttatggaggc catactgaag atcttgtagc taaaggaaaa     360
tcttttttatt attatggaag ggtgatggaa agccttgata aagtagagga tgcaatgacg     420
ttttatttaa aggcgaaaga tgtacttcaa agcagtgatc agtttaaatt attgggacta     480
atatcagagg gaataggaac tcttaatagg aaacagaaat tatttgatac tgcattaaat     540
agctataagg agtctttaac ttattattct ctagtaccag actctctctg tatgacatat     600
gctaatagga atattggtag agtgttttta tataaaaata ggcttgatag cgcctactat     660
tattatgata aagcaattta tatttctaat gcaaataaat atgtagctgt agggtcgttg     720
ttattggaat taggagtgat tcatcgttca gaaaaagatt acattggtgc tgaacgatat     780
tttttgacat ttcttgagaa agaaaaaact ccaaataaat tgtattctgg gtatttggca     840
ttaggaaatt tgtatttata catgaatcgt tttgaagatg cagaacattt tcttatgtta     900
tgtttggata gccctgatcc agttgttaag agagatgcgt gtgagtgttt atatgatttta     960
gagaaagaat caaataaatt taaagaagct gtgatctata aagatatagc ggattcctta    1020
cgaatgatga cacaagatat tgatactcaa aatgccatag cagatttgca gggtagatat    1080
aataacgaaa aatggcagag ggaaagtcta caatccagta ttgagaagaa gaatattctt    1140
ttaataagtt cgtttgtggg ttttattgca gtaatggtta ttatttatat ttattataaa    1200
tatagaacca atcaaaaact ggttaaggat atcaatgaaa gaattcgtaa aaatgatgtt    1260
gacataaaga tgtatcaaag gcaaatactc aattatcaag atttgcaaaa ggaaacattg    1320
caggattatc gaaatcagat aggagaattg catgggaaaa tgtctgtcct tgaagatcag    1380
aataaagcat tatctcttcg tttaacagag aagaagcatg atataccgga aagtgaagcc    1440
gatgatctct atgctattta tatgcaagca cttcatatac taataatgtt aagagggaaa    1500
aatatagaga atacttcagg tcagaaattg cttttggatg ccgattggga taagttattt    1560
catctatcta atgctataca tggtgatttt attacgcgta ttaagaatga ttttcctact    1620
cttaccaaac atgatattga aatttgctgt ctattaagat ttggtattga acatgaggtc    1680
ttaggaagta ttttttctgac ggagactgat tcagtgacaa aagctaaaag acgtatgaaa    1740
aaacgactga atctatctgc ttcggatgat ttggacgttt ttttgctaaa atattag       1797
```

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<210> 764
<211> 312
<212> DNA
<213> B.fragilis
```

```
<400> 764
aataacaacg taatggtaaa acacattgta ttatttaagt taagagacga cgttcctgta      60
gaagagaaac tcgttgtgat gaatagtttt aaggaggcta ttgaagcatt acctgctaaa     120
atctctgtga tccgcaaaat tgaagtcgga ttgaatatga atccgggaga aacctggaat     180
attgcgttgt atagtgaatt tgataatctg gatgatgtga agttctatgc tacccatccc     240
gagcatgtgg ctgccggtaa gattttggca gagacaaaag aaagtcgggc ttgtgtagat     300
tatgaatttt ag                                                           312
```

```
<210> 765
<211> 213
<212> DNA
<213> B.fragilis
```

```
<400> 765
agaaatgtat ttggtagagg attttatata ggacaagagt ttatagcata tcagatgctg      60
aaactgagaa aaaacttcat tgataatcaa aagagacagg gtacgccgtt tgaacggaag     120
tgtaccctgt ctttttatta ttcttctaca atatccagct ccttgatgat gtgtgaggca     180
cctgcatact tatcaataat aaatagagta tag                                    213
```

```
<210> 766
<211> 864
<212> DNA
<213> B.fragilis
```

<400> 766

```
gtctctgcat ttacttattg tgaattagaa tttatatctt tgcaaactct aaaaaataga     60
tttatgaaac aattgaaatt aatggtgttg accttaaccc tgttgatggg tactatgttt    120
acttcatgta tggattccgg agaaagcggt cctcagcagt gggccggtgt ggtgaaagtg    180
aatgatagaa tgggttatgt tacattcaca gatgctgccg gtacagagct gatccctact    240
aacacgattc ctgtaacttt gaatgcaaga atggcttaca tttattgcca ggttgatgaa    300
ggtcaggacc tctcaacaaa tcctaagtca attaaaatta cacttttagc agatcctaca    360
ggaattgatg ctacagcaat aaccactccg aaagtagaat caagtgatgt gactactaat    420
gcacctgttg gttcgttgag ttttgcatca ggatattcaa ctgtggcccc atttcagttt    480
agtgaaaata cgattgtatt accagtactt tatcgtgtga aaaatgtgac tactacagaa    540
gatattaaaa atgagcttgc taaacatact tttactcttg tctgctatac agatgatatt    600
aaatctggtg ataccatttt gaaactttat ttacgctata aagttgagga tgaacctgct    660
gctattgctg agcgtgcaac acgtacttcc agctttaagg cttatgaaat cagccaaatc    720
ttaagagaat atactctgaa gagtggacaa actaaacctg ctaaaataac tatagtagca    780
cagcaaaatg agtacaacaa taagttggaa gatacttcta ctatagagaa ggtatatgaa    840
atagaatata aaactgcgga ataa                                           864
```

<210> 767
<211> 393
<212> DNA
<213> B.fragilis

<400> 767

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aatatgaaat tgcgtgttat tttatcgtta attgtggtat tgttcattgg acagtccatg     60
tgtgctatgt caactcaaat tcttcgtaga cccattattt tagatggtga aattattgaa    120
gaagaagcga gtcgttccat caacccgttg attcctattt ctgcagatat tgatggcact    180
actttatttta ttgaatttac aaaggttata ggtaatgtgg atattacagt gaaagatgat    240
accaaaaaag aagtttattc atcttctgtg gatgtaactg ctgctaatca agctacttcg    300
ttctctattg ccgatttagc accgggaact tacctgcttg aatttaccaa ttcgaatggc    360
ggttatgtat atggacaatt tattgtagaa taa                                 393
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<210> 768
<211> 714
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (613)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 768

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cccacacccg gaatcattga agcgagctct ttcagattac ccattttctt aatctgggac    120
atctggctga ggaagtcgtt gaagtcgaac tggttcttgg caatcttctt ttggaggcgt    180
ttagcttctt cttcgtcata ttgttcctgt gcgcgttcca ccaacgaaac gatgtcaccc    240
atacccagga tacggtcggc catacgggca gggtggaact ggtcgatggc atcgagtttc    300
tcgccgtac ctacaaactt gataggtttg ttcactaccg aacggataga gagggccgca    360
ccaccgcggg tatcaccgtc gagcttggtc agcaccacgc cgtcaaagtc gaggcgttcg    420
ttgaactctt tggctgtgtt gaccgcatct tgtccggtca tagagtctac cacgaacaga    480
atttcgttgg gctggatggc ttctttgatg gcagcgatct cattcatcat ctgttcgtcg    540
actgccagac gtccggccgt atcgacaatt accagatcgt atcccttggc acgtgcttct    600
ttgatggcat tcntggcgat ggaaaccgga tctttgctgt cgatctccga gtacatcggt    660
acgtcaatct gttcggccaa tacgcgaagc tgctcgatag ctgccggacg gtaa          714
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<210> 769
<211> 237
<212> DNA

<213> B.fragilis

<400> 769
tgcggttttc cgggtgtttt cttttttgttg gcaaagaaga agtgttttgt gtttaaaaga   60
cttgttctttt gcaaacaaaa cacttgtttt aacactctgt taaatcaagc attttatata   120
ctgaaagtga agtcgtttaa gttgttgata cagagtggat cgttgttgtt tctagttttt   180
ctgctatcct gcttgtccgg gtgtgatgat agatggtatt tatcaaaacc acaatga   237

<210> 770
<211> 1149
<212> DNA
<213> B.fragilis

<400> 770
tattcatcgt taaataaacg aattatgata aagagaataa agatattagc tacaggtgca   60
ctgctattgg caggattggg tgcttgttca ccttccggaa agaaaacagg agcggattcg   120
actgtcgaca ctctgcgaac ggcggaaaca gtgaatttac tgaataatct acggaaggtt   180
cccacacagg ggattatgtt tggtcatcat gacgatccgc tttacggtgt cggctgggaa   240
ggtgacgaag atcgcagtga cgtgaaaagt gtgtgtggtg attatccggc tgtcatgtcg   300
tttgatctgg gccacattga actggaaaga gagaaaagtc tggataacgt gccgtttcgc   360
aaaatacgtc aggagacgat taatcaatat aaaaggggag gagtggtttc ttttagctgg   420
catctcgata acccccttgac cggtaaagat gcgtgggatg tgagtgatac gacggttgta   480
gcttccatac tgcccggtgg tgtacatcat gcgaaattta taagttggct cgatgctgtt   540
gcagccttta tgaatacttt ggagacggaa gaaggtacaa aaataccggt tattttccgt   600
ccctggcacg agcataccgg cagttggttc tggtggggac aaaatctttg cacggccgac   660
cagtataagg ctctttggcg gatgacgcat gatcgtatgc atgcccgggg agtaaagaac   720
ctgctttatg cttattcacc gggatcggaa cccaaagatt cgactgctta tctggagcgt   780
tatccgggag atgatatcat cgatctggtg ggctttgaca cctatcagtt cgaccggaca   840
caatatatgg agcaattgga taagtcgctt gctatcctga ctgaagtagg taaggcgcac   900
gataagccta tagccattac cgaaaccggt ttcgaggcta ttcccgattc tgtctggtgg   960
acacagactc tctatccggt aatcagcaag tatcctatca gttatgtgtt ggtgtggcgc   1020
aatgcacgtg aaagggtaaa ccactattat gctccttatc ccggacaggt gtccgccgat   1080
gactttgtga agttctaccg tgaaccgaaa actctgtttg tgtcggacgt gaagaacctt   1140
tataaatag   1149

<210> 771
<211> 1560
<212> DNA
<213> B.fragilis

<400> 771
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tgccgccgcc gaatgtctgt tcagtacgtt tgcacgcatc cgtgcggtcg gagagcaaaa   120
acagccccgt tggctgactt ctatctccct gctgatttac ggaatccttt tcctcggaac   180
tctatttttt atcggagatt tcttaataaa caagttatga caaagaaaaa tctactcaaa   240
ggaatctgcc tgctatggct attgctggca gtaactcctg tattgcaagc ccaggatcgt   300
gcgcaacagg catccgaact tctcgaccga ctgattgcag gccaaggaga cagtgtgtat   360
gtacatctgg acgataacat ccggaaaatg ctttccgtag agatgttgaa cggactgttc   420
aagcaattgg aacaacaagc aggtaagtat cagtcgcatg gagagtggaa caccgaacca   480
ataaacggaa tgactatttta ttattgcgac gttaagttcg aacgcttacc attgcgtttt   540
ctcacagcgt tcaatccgga cggaaaggtg aataccattc gtttcgtacc tgttccggct   600
gaaaagacca ctcccccgac gacatcggta caagataaaa taaaagagac agacatacag   660
gtttgtacgg ggaatttcaa gcttcccggc acactgactc ttcctaaaaa cggcaaagat   720
ctgccggtag tcattttggt acatggctcg ggggccagcg accgggacga aacggtaggg   780
gccaataaac cttttcggga cctcgcgtat ggactggccg agcgtggaat agccgtgatc   840
cgttatgaca agcgtaccaa agtatatgga gccgacagcg cacctgcagg caaagaaatt   900
actttcgatg aagaatcagt ggatgacgcc ctttcggcaa ttaaacttgc ccgttccata   960
ccgacaataa atcccgaacg gatctacatt ctcggacata gcctgggagg caccttggct   1020
ccccgcatcg cccaacgtag cgataaagtt ccggcaggga ttattctgct tgccggtgca   1080

```
gcccgtccac tcgaagatct gtttataagt caggtgaagt ttctcgcctc tgcactccca    1140
tcggctaaag atattgaaaa ggaaatagcc gaattacaga aacaagtgga caacgtgaaa    1200
aggctgggta cagacacatt cgacattaca actcctttgc ccatgaatct ctctcaagct    1260
tactggatgc ttgccaatca atataaacct ttggaagtgg tccgaaaact gactctcccc    1320
atacttgtcc ttcaaggcga acgtgattat caggtcacca tgcaagattt cgaattatgg    1380
caatccgccc tggcaaagca tccgaatgcg atatttaaat cttatccccg actcaatcat    1440
ctgtttcagg aaggagaagg gaagtcaacc cctcttgaat acagccgtcc ctcctctatt    1500
ccttcttacg tgacggatga catcgcagct ttcatcaacc gacccaagcc cggtaactga    1560
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<210> 772
<211> 1569
<212> DNA
<213> B.fragilis

<400> 772
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tatataatta cgatgaataa gaaaataatt atccccctcg cactggctcc attggctgcc      60
ccggctctgc aagcccagca ccagcagccg aacggacgta cggacacacg ccccaacatc     120
attctcttca tggtagacga catgggctgg caagatacat ccctgccttt ctggacccaa     180
aagacacact acaacgaggt atacgaaact cctaatatgg agcgccttgc caaacaaggt     240
atgatgttca cccaagccta tgccagcagc atcagttcgc ccaccgctg tagcctgatt     300
acaggaacta acgccgcgcg tcaccgggtg accaactgga catatcccaa aggccagcaa     360
acagaccgcc cgagcgatgt attcaatgta gcggactgga atgtaaacgg ggtttgccag     420
gttcccaata tcgaccacac gtttcaggca acctcactgg cagaaatcct gaaagacaat     480
ggctaccaca cgattcattg tgggaaagca catttcggcg ccgtcaacac tccgggagaa     540
agtccttatc acatgggctt tgaagtcaac atagccggac atgcaggagg cggattggca     600
agctacctgg gtgaaaataa ttacggaaac cggacggacg gtaaaccgaa tccctggttt     660
gccgttccgg gattagagaa atactgggga accgatactt cgtcagtga gctctgacg     720
ctcgaagcta tcaaagcact cgatcatgcc aaagaataca atcagccttt cttcctctac     780
atggctcact acgctatcca tgttccgatc gataaagaca aacgcttcta tcaaaaatat     840
atcaataaag gattgactcc caaagaagct gcttatgcgg ccctgatcga aggtatggac     900
aaaagtctgg gtgacctgat ggactggctg gataaaaacg gagaagcaga caataccatc     960
gtcatcttta tgagcgacaa cggcggtctg tcgagcgaac cggaatggcg tgacggaaaa    1020
ctgcacacgc agaactctcc tctcaacagt gggaaaggat cggcttacga aggcggtgta    1080
cgcgaaccga tgatcgtccg ctggccggga gttgtaaaac cggataccaa atgtgataaa    1140
tatttaatta tcgaggactt ctatccgacc atactcgaga tggcacaaat caaacattat    1200
aagacggtac agccgatcga tggaattagt tttatgcctc tgctgacaca taccggtgat    1260
ccgtccaaag gacgcagcct gcactggaac ttccctaatc attggggaaa cgacggtccc    1320
ggcatcggcc cgacctgtac cgtacgcaaa ggtgactgga gttgatttta ctactatgac    1380
agcggtaaaa aagagttgtt caatattccg gaagatatag gagaaaagaa tgacctggca    1440
gccctacatc cggacattgt gaaaagttta tctaaagagc tgggtgacta tttgcgcaaa    1500
gtaggcggcc aacgcccttc attcaaagca accggaaagc catgcccatg gccggacgaa    1560
atcaaataa                                                             1569
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<210> 773
<211> 321
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (304)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 773
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caatacgcaa tagaaccgca atttgcaatc acaatgaaga taattattgc tggtgccgga     120
gctgtaggca cccatttggc taaattactc tcacgcgaga aacaggacat catcctgatg     180
gacgatgacg aagagaaact aagtacgttt agttctaact tcgacctgat gactgttacg     240
gcctctcctt cgtccatatc aggactgaaa gaggtaggca tcaaagaggc agacctcttt     300
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attngcggtc actcccgatg a   321

<210> 774
<211> 1410
<212> DNA
<213> B.fragilis

<400> 774
aataagaaaa ccaagaatag aatgactgcc atgattacac tgaaagagaa gatcggttac   60
ggactgggcg atatggcttc gtccatgttc tggaaactgt tcgggtccta tctgatgatt   120
ttttataccg atgtattcgg cttgcctgct gccgtggtag gaaccatgtt tctgattacc   180
cgggtatggg attcggcttt cgatccgatc gtgggagtga ttgccgatcg cacacagacc   240
cgctggggga aatttcgtcc ttatctgctg tatcttgccg ttccttttgc actgattggt   300
attttactt tcaccactcc ggagttgaat gataccggaa aactggtcta tgcctacatc   360
acctattctt tgatgatgat ggtatattcg gctatcaatg tgccttatgc ttcactgctg   420
ggagtgataa gtcctgaccc gaaagaacgg aatccctgt ccacttaccg tatgactttt   480
gcctatatcg gcagttttat tgctttgctg ctcttcatgc cgatggtcaa cctgtttggt   540
ggtgcagaag acgagcaacg gggatggatg ttgagtgtgg tggtgattgc tgtgatgtgt   600
gcggctctgt tttatctttg tttcgccttg acacgtgaac gggtaaaacc gatcagggaa   660
gtacaaaact ccctgaaaga cgatttgaaa gatttgcttc acaaccgtcc gtggtggatt   720
ctgctcggag ccggagtggc agctttggta ttcaattcta ttcgtgacgg agctacggtt   780
tattacttca agtactttgt tgtggaagag gattactcca cggtttcctt ctttggcgtt   840
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attcttgcag ctccggtcag taaccgtatt ggcaaaaaaa acacatacat gggagccatg   960
agtctggcta ctctcctttc cgttatcttt tattggtttg ggaaaggaga catcaccctg   1020
attttgttt ttcaggtgct gatcagtatc tgtgccggaa gtatttttccc tttgctctgg   1080
tccatgtacg ccgactgtgc tgactattcg gaactgaaga ccggcaaccg ggctacaggt   1140
ctgatcttt cgtcttcgtc catgagccag aagttcggtt gggctatcgg aagtgcactg   1200
accggttggt tgttggctta cttcggcttt cgtgccaacg aagtgcagag tgtagaggct   1260
attcatggga ttaagatgtt tctcagctgg ttgcccgctg tcggaacagt tctgtccgtc   1320
gttttcatca gtatgtatcc gctgtcggag aagaagatga gagaggtgac ttcagagttg   1380
gagaagagaa gaaaggctat tcaatcataa   1410

<210> 775
<211> 1995
<212> DNA
<213> B.fragilis

<400> 775
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tcttgcaatg actttctcga caaagagcca ctagatgccg tacctaccga caaatatctt   120
ttggcagaaa gcgatttagc agcctattcg gctaatctat atgatcaact tccatcccac   180
actccaggcc aatacagtat gggagtattt gcaacagaca ataatagtga caaccaagca   240
gcaagtaatc caaacggttc atttgtaaag ggagaaacac gtgtggctca agtggaggt   300
gcttgggatt ttgggaaaat ccggaatgtc aattatttca tcaataaggt acgtccccga   360
ctggaagccg gcgaacttag tggagtagaa gctaacaata tgcactatct gggagagatg   420
tatttctttc gcgcttatat ttactttact aaattagttg cactcggtga tttccctatc   480
ttaaaacatt ggatttcgga agattatgaa acagttagag aggcaagtaa acggcgccca   540
cgcaatgaag tagcacgttt catcatacaa gatttagatt ctgcttacta ttatatgaaa   600
gcaaccccac caatgagcaa tcgcctaacc aaagactgtg ctgccctcat gaaaagtcgt   660
gtggcattat ttgaaggtac ttgggaaaaa taccacaaag ggaccgcacg tgtaccagga   720
ggtccgggat ggccaggagc aaacaaagat tatttaaagg acttcactat caatattgat   780
tctgaaatta aatacttcct gacagaagct aaaaactgccg ctcaaatagt agctgataaa   840
tacactttat ttaacgatta tccgtcgtta ttcaacagcc aatcattagc taacgcttcg   900
gaagtgttat tgtggagagc ctacgacgcc agtttaactc cggcagtcaa ccattttgtt   960
gtcggttaca tccaacgcaa tggaggtggg aataccggat ggactcgtag tatgatgcaa   1020
agttatttga tggaaaatgg cttgccaata tacgcaaaca attctggtta tcaaggagat   1080
aaaacttatg aagcagttgc aaccaatcgt gatccacgac tgatttataa tactttatta   1140
cctggagatc tcttatctga aggaggaagt aacattgaat atctagtcaa aggatatggt   1200

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tattattatc gtgcaccaat tgtacttgga caggacgaaa acaaatgtcc caccggctat    1260
tcagtaaaaa agggattagc aacagatgcc gcacaaggac ctacactccc atcaactaca    1320
gcctgtgtca tattccgtgc agcagaggca tacttgaatt atatggaagc tgattatgaa    1380
ctgaataact cgcttgatgc caacagttcc aaatactgga aagctttacg aaatcgagca    1440
ggaatggata ccgattttca aaaaacaata gacgctacag atctgagtaa agagatcgat    1500
tttgcccgct attcaggttc tgaatttgtt tcaaccactt tgtataatat tcgtcgggaa    1560
cgtcgcatcg aatttgcggc cgaaggatta cgcctaaatg atctgaaacg ctggcgtgca    1620
ttagacatga tgcaaggtta tcacgtagaa ggattcgatt tatggagtga aaattatcaa    1680
cgttacaaaa ctcctagccc aataccagtt gcagacgtca ctctctctgt cattaatctg    1740
attgaatcag gtaacaataa tgctaatgta tcagctaaat cagaaagtcg gtacttacgt    1800
ccttaccgga tcaatacaaa caacattgca tacaatggct ataattggaa ccaaaataaa    1860
tatttaaatc caattgcttt tgaccacttc cgtctgacga cagcagaaga aggatcaacc    1920
gactatacaa cctctacgat ttatcaaaat ccaggatgga agatagaaac gagcagtctc    1980
cctgaaggag attag                                                     1995


<210> 776
<211> 651
<212> DNA
<213> B.fragilis


<400> 776
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attaatgaat atatgattaa agccatggaa gccattggag cacgtttga atcgggacaa     180
gtgtttgttc cgaacctctt gatgagtgcc cgtgccatgc gtggtgccct cgatatactc    240
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aaaggggatt tgcatgatat aggtaaaaac ttggttgctt cgatgtttga aggatgtggg    360
tttgaagtca tcaatctggg agtggatgta tcgagtgata aattcatttc tgcggcattg    420
gaaaataagg cagatattat ttgcatgtcc gcactgctca ccactaccat gaattacatg    480
aaggaagtga tcgatgccct tgaaacctcc gggttgaggg gaaaagtaaa agtaatggta    540
ggaggagcac ctgtcagcga tgcctttgcc aaatctatcg gtgccgatgc ctataccagt    600
aatgccaatg cagccgtaat aatggccaag aagttgataa acgcctgttg a             651


<210> 777
<211> 1914
<212> DNA
<213> B.fragilis


<400> 777
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ataggaggca agtggatgag ccaccgaaca gcgggcacca taggcacgct ggtattggca    120
gcagtgacag tactctcgta cgtcacggcc gtacattact tctcggcacc ccgtctggca    180
gacggaacgt ttgccacact cattccttat aactttgaat ggcttccgtt cacggaaaca    240
ctaacgttca acctgggcat tttgctcgac cccatctcgg tgatgatgct gatcgtaatt    300
tctacagtca gcctgatggt acatatctac tctttcggct atatgaaagg cgaacgggga    360
ttccagcgct actacgcatt cttatcctta ttcaccatgt ctatgctcgg actggtagtg    420
gcaaccaaca ttttccagat gtacttattc tgggagttgg taggtgtatc ttcttacctc    480
ctgatcggtt tctactatac ccgtccggct gctattgccg ccagtaaaaa agcattcatc    540
gtgactcgct ttgccgacct gggcttcctg atcggtatcc tgatatacgg atactacgga    600
ggtactttcg gatttacccc cgacacagtt tcaatgttga gcggtggcgc cggtatgttg    660
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catatctggt taccggatgc catggaaggt ccgactcccg tcagtgcact gattcatgcc    780
gctaccatgg tagtagccgg cgtttacctg gtggcacgca tgttcccgct ttttcatcgaa   840
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gccagcgtgg cttgcgtgca gagtgacatc aagcgtgtac ttgctttctc gaccatctca    960
caaatcggat ttatgatcgt ggcactgggt gtttgtacct cttccgatcc gcatcacgga    1020
gggttgggat acatggccgg catgttccac cttttcacac acgccatgtt caaggccttg    1080
ctcttcctgg gtgcaggcag cattatccat gccgttcact ccaacgagat gtcggctatg    1140
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attgcaggta ttcctccgtt ctcgggtttc ttctccaaag atgaaattct ggcagcttgc    1260
ttccagtata gcccgacgat gggttggggtg atgaccgtca tcgcagctat gaccgccttt    1320
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acaagcgatg gtacaagcca cgtacatact ccccacgaat ctcccctgac catgactgtt    1440
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atcagctcca acggtgaatc gtataccatc catcttgaga catcagtagc cgtcacaagt    1560
gtagtgattg ctgtggcgtc catcgtcctg gccacttgca tgtacctgcg tcagcagcaa    1620
cctctggcag ataaacttgc caaacgtttt gccggactgc accgtgcagc ctatcatcgt    1680
ttctacatcg acgaggtgta tcagttcatc acacaccgga ttatcttccg ttgtatctct    1740
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ggtacccatg ctacaagcga tgagatacgg ggattgcaaa gcggacgtgt acagcaatac    1860
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<210> 778
<211> 1320
<212> DNA
<213> B.fragilis

<400> 778

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cgtctgacgg tgaatggaaa ccccctattat tatataggaa ctaatttttg gtatggagct    180
atttttggggt cacagggaca gggaggtaac cgggagagat tacttcgtga actggattat    240
ttgaaggctc ttggtattaa caatttgcgt gttcttgttg gagcagacgg aaaaagatggg    300
attccgacga aagctgagcc tgcacttcag gtggaagccg gtgtgtataa tgatactatt    360
tttgacgggc tcgatttctt cctgtcggaa gttgataaac gggatatgta tgccgtactt    420
ttcctgaata acagctggga gtggtcgggc ggatattccc agtatcttta ttgggcggga    480
catggtgaag tgcctatgcc gaatgtagcc ggatgggatg cttttttcgaa ttatgtggca    540
caatatgcta agtcggaaaa agcacaccat ttgttccggg atcatattac tcacgttgta    600
aatcgtgtca atcggtatac tggaaaaaaa tatagtgaag atcctgcaat tatgtcttgg    660
cagataggta atgaaccccg ttcgttcggt gaggacaata aaaagagttt tgcagcctgg    720
attgccgatt gcgctgctct tattaaatct atggattcta accatctggt ttctattgga    780
tcggaaggaa tggccggttg tgagggggat ttgtcacttt ggacttctat ccatgccgat    840
gcgaatgttg attatactac gattcatatt tggccgaata attggggatg gatcgataag    900
aaagatattc cgggtaccat cgggcaggca atagaaaaca cctgctctta tatcgatatg    960
catgtgcagg aagctttttaa gataaacaag ccgctggtac ttgaagagtt tggtttaccg    1020
agagacagtg tgaagtttac ttcgaatact tccactgttc agcgggatcg gtattacaga    1080
gctgtgtttg atatcgtcga aaagcatgct gccgaaaagg gtgttttcca aggatgtaac    1140
ttctgggcat ggggtggatt tgcggaacct caacatctct tttggcaaag gggagatgac    1200
tatatgggag atcccgggca ggaggaacaa gggctgaatt cggtttatgc aacagattcg    1260
acgataaata tgataaagga ggcggtaagt gatattaacc agataattca gaaacaatga    1320
```

<210> 779
<211> 1191
<212> DNA
<213> B.fragilis

<400> 779

```
ttcagacatc atatggacga gattcttaaa caagaaatgc agaaagagct tactacccgt    60
attcttcctt actggatgga acggatggta gatcaggaga acggtggatt ttacggacgc    120
atcaccggac aggaggaatt aatacccccgg gccgataaag gggctattct gaatgcgcgt    180
attttatgga cctattctgc tgcctatcgt ctgctgggta gagaggagta caaagagatg    240
gcaaaccgtg ccaaacgata ccttatcgac cactttttatg attccgagtt cggaggggtc    300
tactggtcac tcaattatag aggtgagccg ctggatacca agaaacagat ttatgccatc    360
ggctttgcca tttacggact gagcgagttc catcgggcta ccggagatcc ggaagcattg    420
atgtatgccg tccgtttatt caatgatata gagtcccaca gctttgatgg gctgaagaac    480
ggttattgtg aagcgcttac ccgtgaatgg aacgaaatag ccgatatgcg cctcagcgag    540
aaagatgcga atgaacgcaa gaccatgaat acccatctgc atatcctcga accttacacc    600
aacctgtacc gggtctggaa agatgcacgg ctggaacgtc agctctacaa cctgataggaa    660
```

```
ctttttacag agaagatact ggataaggac acatcccatt tacaactctt tttcgataac      720
gactggcaaa gcaaataccc ggtcgtctct tatggacatg atatcgaagc ctcatggttg      780
ttgcatgaag ccgcccgggt attgggagac gccggactca ttgcggagat agaacctgtt      840
gtaaagaaga tagctgcggc tgcatccgaa ggacttacct ccgacggagg aatgtatatac     900
gaaaagaatc tcactaccgg acacatcgac ggcgactacc attggtgggt acaggccgaa      960
accgtagtcg gatactataa cctgttccga tatttcggtg atcgcggggc tttgcaacat     1020
tccatcgact gctgggagtt tattaaacga catttgactg acgatgtgca tggcgaatgg     1080
ttctggagcc ttcgtgccga cggtagcctg aaccgggatg atgataaggc cggcttctgg     1140
aaatgtcctt atcataacgg acgtatgtgc atcgagctgt tgggcgaata a              1191
```

```
<210> 780
<211> 1809
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (1138)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 780
```

```
attgttttcc aaactttttg tacttttggg cacaatttac cgaatatgaa aaacaagcac       60
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ggagtatact actcctacca tctgcattat caggaacagt tccagatgtt tctctttaca      180
tccgactatt ttgtcgaaca agtatcccat cccggggggaa tggcggacta tctgggaggc     240
tttctcaccc aattctatta ttattcgtgg gcgggagccg ctatcttgac cggtgcaata      300
gggggtattc acaggttgat ggtttggatt gcaaatcgcc tgggcggaca cccggcatgg      360
tatccgctta ctctgttacc ttctttatgt ttctttattc tgttctgcga cgaaaatttt      420
cttctttccg gagccatctc tgtgggaatg gtgctgggag cactcatcgg atatacattt      480
attgagaata ggcagatacg cctgatttat tggggagtcg gcattccgct gctttatctg      540
ctggcgggag gatgtgcatg gctttttcatt ccattgatat ggataactga gttttgccgg     600
tttgccggta ggcgtctgcc ttggtggatt ctggtgggag gtacattggg aattgccgga      660
gtgacctatt ggatatcctt ggctgtattt ccatatccgg ccgaccgcct gttgtgggcg      720
atcggaagtt atcgttttcc attagtcttt ccacaaatgc aggtgatagc ctggctggct      780
gtgattctgg taccgttatt ggtagctcgt ttgcccgaga agatgacttg gagatactac      840
tcgggagcat gggttctgca atttatcctg atgttgtttg ttttgaatct gtatggcaaa      900
tacggtatcg ggttgaataa agaggaagtg atggggtatg attatcatgt gcgcatgcaa      960
gaatgggatg aagtgattgc gatggcggaa aagaaagcac ccgatacacc gatgtcggtt     1020
tcttgtctca atttggcttt agcaatgaaa gggcagctgc gggaacgtat gtttagtttt     1080
taccagcggg ggaaggaagg actactgatg tcatttgtca acgacttcac cattcttntg     1140
gtagccggtg aaccttatta ttacctggga ttggtcaatg tggcgcagca gtttgtcttc     1200
gaggctatgg aggccgttcc ggattaccgg aagagtgtgc gttgtttttaa aaggcttgct     1260
gagaccaatt tgattaatgg caggtacgaa gtggcccgga agtatctgcg tatcttgcag     1320
catacctct tttataaaga ttgggctact gaaactctgg cttgcctgaa tgatgaagac      1380
cgggtcaatg cacatccgga atacgggaga ttgaggaggc ttactccgcg aaccgatttc     1440
ttctttaacc ctgacctgcc ggagatgaca ttggagttcc tgcttcatgc aaatccccgc     1500
aaccggatgg cgtatgagta tttgatggct tgtacactct tgaagaagga tgtgggacgt     1560
tttgtgcatt attatccttt gggagccgat ctgggtatat cttccgttcc caagggctat     1620
caggaagcgt tgttgttcta ttggcttatg agcaaacaca ctgcaacaga tacaattccc     1680
tggaagatag acccgcagac agagaataga ttgagagaat acgcgcagat tttcacatct     1740
gcccgttcgg cagatgcatt gtctgcccga ttcggagata catattggtt ttatgcagac     1800
tttagataa                                                             1809
```

```
<210> 781
<211> 777
<212> DNA
<213> B.fragilis

<400> 781
```

```
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cggcattatt ataatccggt gaccggagga aatttttatg atactacgca agtggttcgt    120
catatcttgc cgggaggttc ttatcatgct accttcaaag ccgatttgaa gatcattgct    180
gattttgcac acaatgcaaa gggcgatgac gcagagttga ttccgatcat attccgtcct    240
tggcatgagt ttgatggtaa ttggttttgg tgggcaaaaa atcattgttc ggttgaagaa    300
tttaaaaagt tgtatcggtt tacagtcact tatctcagag attctttaga ggtgcataac    360
tttttatatg catttttctcc ggactgtggt ttcactactg aggccgaata tctgaaacgt    420
tatccgggag acaaatatgt agatgttgta ggtatggata attattggga ttttcgtccg    480
tatgggggag atacctccct ggtagttctg aaagcccgta tccttacgca atatgcgcaa    540
aagcatggaa acctttctgc cattactgag tcaggtacgc agacacgtga ttcattgtgg    600
tatacacaat tgttatctat tctgcgttcg gaaggggtag ccttgaatta tgtatgcact    660
tggtcggggt tttctcctta taaaggacat ccggcagcag ccgatttttg tcggtttaag    720
agggacactt tggtgctctt cgctgatgaa attcctaatt tttatacttg gcactga       777
```

```
<210> 782
<211> 1197
<212> DNA
<213> B.fragilis
```

```
<400> 782
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agactaaaga ttatcgcatt gacagcactg gtgtgcctga ccggcagcag ctgtacggac    120
gacgagaaca acggacaggg caataacatt atttatggtg agaatatcat cggaaacgga    180
gaacagacct tcgagataaa agatcatcaa tacctgaaac ggggcactta cctgatgaag    240
ggatggtgtt acgtcactta cggttcgacg ctgaccattg aagcgggcac cgttatcaaa    300
ggagacaagg aaacccgcgc cgccctgatt gtagaaccgg gcgggaaact gattgccagg    360
ggaacggtag atgctcccat cgtattcacc tccgaaatgc ccgccgggaa acggaaaccg    420
ggtgactggg gaggattgat tttatgtggt tatgcccgga caatgaagaa catcatgcag    480
atagagggag ccccgcgtac catgcacgga ggtccgaaca acgcggataa ttcgggcgtc    540
ctgagctacg tccgtgtaga gtttgcggga tatccgttca agaaaaacca ggagatcaac    600
ggcatcacct tcggttcggt aggaaacggc acgcaaatag accacctgca agtatcgtat    660
gccaacgacg atgccttcga atggttcggc ggaacggttc atgcggaata tctggtggcc    720
tatcactgct gggacgacga tttcgacata gacaacggct atagcggcac atgccggcat    780
ctgctgggca tccgccatcc gcgaatagcg gacatcacag gttctcatgc cttcgaatgc    840
agcaataatg gcacgaacac tcctgcgaca cctaccacag ccgccacctt tgaagatgtc    900
acgatctatg gccctgcctc aggggatgcc tcattcgtaa atcatcccga ctttatcaat    960
ggcggcggcc tccggcctga gaatgaaagc atgctcgggc tattcggcgc ggcactgtat   1020
atgggcaaca acacatcggt gactttccgg aactgccgga tcagcggata tccgtcggac   1080
atggagggca caccggcctc agcggataac gtagtattca gcgaaaggga agaaaccggt   1140
tatccggagt ggacccaagg atggtgcaac ttcaacccgc aagagacaga gtattga      1197
```

```
<210> 783
<211> 1134
<212> DNA
<213> B.fragilis
```

```
<400> 783
aagatgagta agaatatgga atacagaaaa catagaatag agtatttaag gactactgtt     60
gaatattccc ttttttgggg tgagggagga acgagagagg cacatttgat gtttcatgtc    120
gatccggaag cggggagtta tgaagagcag ctgacggcca ttcgtaaagc ataccatagg    180
atactgagca ggaaggtgaa aatcagggga atggtacccg tgttttgccg ttacttcctg    240
agtgatgccg ccaatcagtg ggaggctttg caggctgtct tgcagaaaga gccgtcgtgc    300
gctgtctctg tcgtgcaaca gcccccgttg gatggaagta agattgcttt gtgggtctat    360
ctgacctccg aaccgaatgc cgcttacaag cattactgga cagccggtgc gggtgtgtct    420
tgcggcaaat cggaacggca aatgaaaacc ttgttgaaat cttatgaagc cgatctggta    480
ggaaaaggct gtacgctggc ttccgattgc atccgtactt ggatctttgt gcagaacgtg    540
gatgtgaatt atgccggcat tgtcaaggca cgccgtgaaa actttctggg gcagggactg    600
accgaatcga cccattatgt agccagtacc ggcatagagg gacggcatgc cgatccgaag    660
atacatgtgc tgtttgatgc ctatgcggta aaaggattgc agccgggaca ggtgacttac    720
```

```
ctgcatgcgc tgtctcatct cagcccgaca gccttgtatg gagtgacttt cgaacgggga    780
acttccgtgg agtatggcga ccgtcgtcat ctctttatca gcggtacggc gagtatcgat    840
catcgcggtg aagtggttca tgtaggtgat gtccgggaac agacccggcg gatgtgggaa    900
aatgtagaga agttgctcga agagggcaaa gccggttttg aggatgtggc gcagatgatt    960
gtttatctgc gggacgcttc ggattatccg gttgtgcgcg ctttgtttgc caaacgcttt   1020
cctgatacac cgatacagtt tgttgttgct gctgtatgcc ggcctgcttg gctgatcgag   1080
atggagtgta tagcgatcgt cgctaacagt aactcctctt atgaatcatt ctga         1134
```

```
<210> 784
<211> 1197
<212> DNA
<213> B.fragilis

<400> 784
ataacgataa aaacactgtc cattatgagt ctgtttaatg ataaagttgc taaattgctt     60
gccgggcatg aagcactgct gatgcgtaag aatgaaccgg tagaagaggg aaacggagtg    120
attacgcgtt accgttaccc tgtactgact gcagcgcata ctcctgtctt ctggcgatac    180
gacctgaacg aggagacgaa tccttttttg atggaacgta tcggtatgaa tgcgacgttg    240
aatgccggag ccattaagtg ggatgggaag tacctgatgt tggtgagagt ggagggagca    300
gaccgcaaat ctttttttgc tgttgccgaa agcccgaacg gtattgataa tttccgcttc    360
tgggagtatc cggtgacctt acccgaagat gtggttcctg caaccaatgt atacgatatg    420
cgtctcactg cccatgaaga tgggtggata tatggcatct tttgtgccga acggcacgat    480
gacaatgctc ccataggtga tttatcgtca gctacagcca ctgccggcat tgcccgtacc    540
aaagacctga aaaattggga acgtctgccg gatctgaaaa caaagagtca gcaacgtaat    600
gtggtgctgc atcccgagtt tgtggatgga aagtatgcac tttatacccg tccgcaagac    660
ggatttatcg ataccggtag cggaggtggt atcggatggg cattgattga cgatataacc    720
catgccgagg ttggagaaga gaagatcatc gacaaacgat attatcatac catcaaggag    780
gtgaagaacg gtgaaggacc gcatcctatc aagactcctc agggatggct tcatctggca    840
cacggagtac gcaattgtgc tgccgggctc aggtatgtat tgtatatgta tatgacatcg    900
ttggatgatc ccacccggct gatagcttct ccggcggggt actttatggc tccggtagga    960
gaagagcgca ttggggatgt gtcgaatgtg cttttttcga atggttggat agccgacgat   1020
gacggaaaag tatttatcta ctatgcttcg tcggacaccc gtatgcatgt agctacctca   1080
actatcgaac ggttggtgga ttactgcctg cacactcctc aggacggctt ttcttcctca   1140
gcttcggtag agatactgaa aaacctgatt gaacgaaatc tgagattgat gaaataa      1197
```

```
<210> 785
<211> 423
<212> DNA
<213> B.fragilis

<400> 785
ggcatcaaaa atcattcaaa tagattatta atgaaaagaa ttggaatata tattgttatt     60
gtagtatgca tcctgtcttg catatcttcg cgaaggaacc tcttgacaga aaccagattg    120
atgttggttg atacgagagc aactgaacat acggcggcat tgttctataa cttgcggcaa    180
ctgaccggaa aacgggtggt ttatggacaa cataattatg aaatggatgg gttcgattcg    240
gatagtacac gctgggagga tgaggcaaac cgatgtgatg cgtatgatgt gacggggggct    300
tatcctgcct tggctagttt tgaattcctt cattttacga atcctcgtag ttggggaaac    360
aaaagaattg aatttactta caggaaaaat tccatgttgc atataatcgg ggaaatgtta    420
tga                                                                   423
```

```
<210> 786
<211> 483
<212> DNA
<213> B.fragilis

<400> 786
aagatgaaaa atgaagaata tacatatcta ggcggcctga tgcaaggcat cggctccctg     60
ctgacgggta tgaaaaccac catcaaggta tattttcgaa agaaagtgac cgaacaatac    120
ccggagaacc gcgccgaact caaaatgttc gaccgctttc gcggtacatt gaacatgcct    180
```

```
cacaacgaaa acaatgagca ccgttgtgta gcctgtgggt tgtgtcagat ggcatgtccc    240
aatgatacca ttaaagtgac cagcgaaacc attgaaaccg aagagggcaa aaagaagaaa    300
atactggcaa agtatgaata cgaccttggt tcgtgtatct tctgccagct ctgtgtcaac    360
gcttgcccac acgacgcaat caccttcgac caggtatttg agcatgccgt attcgaccgg    420
accaaacttg tcctgcaact caaccgcgaa ggaagtaaag taatcgaaaa gaaaaaagaa    480
taa                                                                  483
```

```
<210> 787
<211> 3228
<212> DNA
<213> B.fragilis
```

```
<400> 787
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tatgcggcgg tagaacttca gcggtattat tatcagctgt ccggacgctt gttgtccatc    180
gatcatgaag aagtaccgga caggaaaacg gaatttgttc tgacaagact ggatcatccg    240
ttagtgaagt cttggagaga caaaggagta ttacctctga agtccatgcc gggagagcag    300
ggatatgtca ttcggacagt aaaagaaaaa ggcagggaat tggttgtcat tgcaggtgtt    360
gatgccaatg gattgcttta tggtgtatat gggttgctgg aagatcactt aggaatgcgt    420
ttctatatga atggagatgt atatcctgat aagaaagagg ttcagacgag aataccgttg    480
attcaagatg aacgaactcc gacagtggct atccgtggat ttcttccctg gactaatttt    540
ccgcaatcgg ctaccattta ttcttgggat gattggcgtt acatcataga tcaggcagca    600
cggatgcgta tgaacttcat tatgattcat aactataacg ggttttgcgg acataatgaa    660
ctgtttcata attttgaata caaagggcat ttatcgcgtg gatggatgcc tactataaag    720
acaggacacg gatgggggctg tcccggatgg aatatcaacg aatatctttt cggggcatct    780
gaagtttatg atgattatga tttcggggca gactatggct tgcataatga aacgttgacg    840
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gcccgttggc gaagagtctt tgatggattt tatgaagaga tgaagcggaa gtcgccttct   1140
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tatcgggatt ttgcacttgc caattatgga gaaaatgcag tggatgccat tactgacatt   1560
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aatcagatgg tacatactta tccgttgatg aatctttatt cgatgacttt tggggggaaag   1680
aatggaaagg atgtggagat aaaagccacc gtatatgcag agaaaaaagg tacaaaaaat   1740
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tttgaagtaa agaacacgga aggttggcaa tcctggaaat cattgaccgt tccggtgaaa   1980
gggttaaaag gtgttcatac gctttatgtt cgttttcaac cttttaatgt aatagccaaa   2040
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atgagtactc agaatcggtt tgtgaaacag aactatgtag agaagatcaa ccagctacgt   2340
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cagattagtt ggcgtaatga agagccggca gtaagttcct tcgtggtttg tcgtaatgga   2460
gaagagattg atacattggc gtctgatgtg aattgttatc aggataagtt tcatggagca   2520
gcttcgtata cggtatatgc agtgggatat gaagggcata aaagcccttt gggaatacct   2580
gccgattgtc tggccgggag tgctgaccgg gaagctccgg ttattgtgat taattccccg   2640
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ttaccggaat ttgtatccgg gatatttcac tatcggagaa caggagagaa agtgtggaaa   2760
```

```
aaaataccat ttaagcaccg gaccagaggt gtcttcacat taaccttacc cgcttctgag    2820
attacgcgtc agggaataga atactacatt tcggtttcag attctgacaa tgtattttgc    2880
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gtgccaaatg tggaaatgta tcgcatctat cgtagcagaa ctcctgattt taaaatcgga    3060
gcagatacgt ttgtgacgtt tgtagcggga aatacacaga gtttttgccga taatggattt    3120
gatttcgacg ggacttctct gaaaggaact tattattatt gcgtgacttc cgtatccttt    3180
tgggatcatg aaagtgaggc atcaaaaatc attcaaatag attattaa                3228
```

<210> 788
<211> 1281
<212> DNA
<213> B.fragilis

<400> 788

```
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ggcgacagcg aagaggtgat cgccaacaac ggaacactga aaggaagcgt agacggatcg    180
aaaaccgtca tcctgaccaa aggctacaac ttctccctcg acggagaata tatcgtcaaa    240
gccggttcca ccctgaagat cggcgaaggt gtgacaatca gcgccaaaag cgatgatgcc    300
accatcgact acatcctcgt ggagcaggga gccaagatcg aagcggtagg tactgcctcc    360
gcaccgattg tcatgactgc cgataccaaa gaaccgggag catggggcgg catccacatt    420
tgcggcaaag ccccgatcaa tatcggatcg accggtaaat cggaagtcgg agatgccgct    480
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<212> DNA
<213> B.fragilis

<400> 789

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<212> DNA
<213> B.fragilis


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<210> 791
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<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (695),(706),(707)
<223> Identity of nucleotide sequences at the above locations are unknown.

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aaaacttgga aacctgatct ttactggttt gacggagact gggaacaaac tgctgaggct   660
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<212> DNA
<213> B.fragilis

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<210> 793
<211> 2511
<212> DNA
<213> B.fragilis

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<211> 1878
<212> DNA
<213> B.fragilis

<400> 794

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<210> 795
<211> 660
<212> DNA
<213> B.fragilis


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<211> 1497
<212> DNA
<213> B.fragilis


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<210> 797
<211> 1596
<212> DNA
<213> B.fragilis
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<400> 797
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cgtaacgaaa aacagatgga cttcctcgaa agcctaacgg gtatggactg gggagtggca   120
gacgaaggtg acgcaccgaa cgtaacccgg ggacttggag tagtctatca tctggaatcg   180
accgtaaccg gcgaacgcat cgcgataaaa acatccacaa ataaccgcga aactccggaa   240
ataccttccg tcagtgacat ctggaaagcg gccgacttca acgagcgtga agttttcgac   300
tattacggca ttgtattcat cggacatccc gacatgcgac gtctttatct gcgtaatgac   360
tgggtaggcc atccgatgcg taaagataac aacccggaga aagacaatcc gctacgtatg   420
gacaatgaag agacatatga tacgactcgg gaaatagagc tgaatccgga cggaacgtat   480
caaactcagg agaatgtgat cttcgatgac cgtgaatacg tagtcaacat cgggccacag   540
cacccggcaa cccacggagt gatgcgcttc cgcgtctcac ttgaaggcga aaccatcaaa   600
aagctcgacg ccaactgcgg atatatacac cgtgggatcg agaagatgaa cgaaagcctc   660
acctatccgc agactttggc actgaccgac cggctcgatt atctgggagc acaccagaac   720
cgccatgcgc tctgcatgtg catcgagaaa gcaatgggta tcgaggtcag cgaacgcgtg   780
aaatacatcc gtaccatcat ggacgaactt cagcgtatcg actctcacct cctattctac   840
tcctgtcttg ccatggacct gggcgcattg acagccttct tttacggatt ccgtgaccgt   900
gaaatgattc tggatatgtt cgaagaaact tgcggtggac gtttgataat gaactacaat   960
accattggag gcgtacaggc agacctgcac ccgaacttca tcccgagagt aaagaagttc   1020
atcccttacc tgcgtggaat catccacgaa tatcacgatg tattcaccgg caatgtcatt   1080
gcccggcaac gtctgaaagg tgtaggggtg ctgagtcgcg aagatgccat ttctttcgga   1140
tgtaccggtg aacaggccg tgccagcggc tgggcatgtg atgtacgcaa acgtatgcct   1200
tacggcgtat acgataaggt ggattttaaa gaaatcgttt ataccgaagg cgactctttt   1260
gcccgttaca tggtgcgtat ggacgaaatc atggagagcc tgaacattat cgagcaattg   1320
attgacaata ttccggaagg accgatacag gagaaaatga aacccatcat ccgggtaccg   1380
gaaggaagtt actataccgc cgttgaaggc agccgcggtg aattcggagt gttcctcgag   1440
agtcatggcg acaagacacc ttaccgtttg cactaccgtt cgacggggtt gccactggtt   1500
tcggctgtcg acaccatctg ccggggagct aagattgccg acctgatcgc tatcggcgga   1560
acgctggatt atgtggtacc ggacatcgac agataa                            1596
```

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<210> 798
<211> 1611
<212> DNA
<213> B.fragilis
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<400> 798
gcgctgctgg atccactgga tgaaaaggcc tatgattttg tgtcgcctga gcagttgggt   60
gacagcgaaa gtgcagcttc tcagctcgtg acaggagcct ataatacggt gatcaccagc   120
tttattgctc cgggatctta tctttacctg accaatatgg actgtgacta cgcatcagga   180
gcttcatggg cattcggtaa tgtgggagcg ggaaacccac aaggttttg ggggatagac   240
cacatgtggc aaggtagtta tacgttaatc caccgggcaa atctgggtat atccaagatt   300
tcggcaatga gtaatctgag ccaggagagt aaacaggatg ctttagctca actctgtttc   360
cttaaagcat gggcttattt taatttggtg agaaattacg gtcctgtacc tattttccgg   420
aaatccattt cggaaggaga agctatgagt caacctcgtg catcggtttc ggatgtatat   480
gcacatatta tcgaattgtt ggaacaggct gaaggtatgt actcaaaaga tgatgcaggt   540
ttcgtggtgg ggcatgcttc aaatggagct gctaaagcat tgttggcgaa ggtatatgtt   600
actatggctt ccggggcgat gtccggtgtg cctatcgtgg ttaagggagg aaatccgaat   660
atatttgaac cacaacctat cacgcacatt gcaaagactg ttgcaggtta tgagtctttt   720
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```
gatccggcca agtattatgc gttggcacgt gacaaagctt gggaggtgat aaacgaatat    780
accctgtttg ataattatat ggacgtatgg gccataggaa accgtaataa gggagaacac    840
atctggatgg cacaggccat cagcggtgat aaggactttg gaaacacgat ctgtcaggat    900
tatgtgggca ttttcaaaga agacggtacg atggaaggta actggtatgg tatgcgcgat    960
cactggtatc tgcttttcga agaacaggat acgcgtattg tcgatggagt tattcatcga   1020
tatgcgtcgg atggtatatc caatggtaag gttatctata actattatcc ccgttggtat   1080
gcaaataaag tggacaataa ggaggtatat gacagtcatg gcaatgcttt tgatggtacg   1140
gaagtctatc atgaacgtca ggggtggaca ttggcgaagt tgacaaaatt tacttttgtt   1200
acataccgga aacaaaaaaa cagtgatttt cactttacgt tactccgttt gccggatatc   1260
atgttgattt atgctgaggc tgtcaatgaa ttgaatggtg ggccggacgc tgaggcctat   1320
aatcaggtga accgcattcg tacgcgtgca catgccactc cgttctccgg aatgaatcag   1380
gatgaattcc gttcggctgt actggaagag cgtgcccgcg aattggccta tgaagctgac   1440
cgccgttatg atcttttccg ttggggtatc tatctggatg tgatgaatgc catcgatatg   1500
gatgagcata atgtgactaa acgtcgtttg gaacgaaatc ttctttatcc gatacctacc   1560
agtgaagtga actctaatga taagattgat tctaataatc cgggatggta a            1611

<210> 799
<211> 1011
<212> DNA
<213> B.fragilis

<400> 799
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atccccatta tgacccatcc gggtattgaa ttgttagaga aacgggtatt ggatgccgta    120
acgaacggtg aaaattcatta tcacgctatc cgtgccttga acgaatgttt tccgcaatcg    180
gcggcttgta ccactattat ggatcttacc gtggaagcag aagctttttgg agctcgactt    240
agtatgtccc ccaatgaagt acccagtgtt tgcggacgtt tgctcactgg atatgcagat    300
gttgaggctt tgcagattcc ttcggtcgaa tcgggacgca tgcctcagta tttgctggcc    360
gaccgcctgg cagcagaagg aatagacaag cccgtgctgg ccggttgtat cggtccctat    420
tctctggcag gtcgtctata cgatatgacg gaaattatga tggctatcta taccgagccc    480
gatactgttc tgcttttact ggagaaatgc acggaattca ttctccgtta ttgtctggct    540
atcaaagaga ccggagtggc cggtgttatt atggcggaac cggctgccgg acttctttcg    600
aatgaagatt gtcaacgcta ttcttcggtc tatgtgaaac gtattatcga tgctgtccag    660
gatgattcgt ttgcagttat tctgcataat tgcggtaaca ccggacattg cactgctgct    720
atgctggcta ccggtgctaa agggtatcat ttcggaaata aggcggatat gataactgct    780
ctccgggaat gcccttcgga tgtatgggtg atgggtaatc tggaccctgt aggagtgttc    840
agggtgctga cgcctgaaga tgtttttgca cggacagaag aacttctgac ctgtaccgga    900
gaatacgcta actttattat atccaccggt tgcgatactc cgcccgaagt acctttttgac    960
aatattcagg ccttttatct ggctgtagag aagtacaata agggtaggtg a            1011

<210> 800
<211> 1458
<212> DNA
<213> B.fragilis

<400> 800
aagaagatgg attattcaca atttctatat atgaaagagg agctgtcact gatagcagtt     60
atcctcatcc tgtttgttgt cgacctgttt acctgtccgg accaaaaagg tgccgctcct    120
aaggtgaacg tcaggtcgct caccttgccg gctgtgatcc tgatgaccct ccacaccgta    180
atcaacctct ttcccggaac tccggcagag gctttcggcg gaatgtatca gtacacaccg    240
atgcaaacca tcatcaaggc agtgctcaac gtaggtacca tcatcgtgct actgatggcc    300
catgaatggt tgagacgcga agacacccgc atcaagcagg gagagttcta tgtactgaca    360
ctctctaccc tgctgggtat gtactttatg atttctgcgg gacatttcct gatgttcttc    420
atcggattgg aaatggcaag tatcccgatg gccgcactgg tggcattcga taaatatcgt    480
catcactccg cagaagcagg tgccaagtac atcctgaccg cactgttctc aagtgcattg    540
ctgctattcg gtctttcaat gatatacggt acgtccggta cgctctattt caatgacctc    600
cccggacaca tcacaggcaa tatgcttcag attatggcat tcgtgttctt ttttgccggc    660
atgggattca aaatctcatt ggttcctttc cacctctgga cagccgacgt atacgaagga    720
gcgcctacag ccgtaacctc ttatttaagt gtgatttcca aaggatcggc agctttcgtg    780
```

```
ctgatgacca tcctgatgaa agtgttcgca ccgatggtgg cacaatggca ggaagtgttg    840
ttctgggtaa ccattgcttc catcaccatt gccaacctct ttgctatccg ccaacagaac    900
ctgaaacgtt tcatggcatt ctccgctatc tcccaagcgg gatacatcat gctgggtgtc    960
atcggaggca gtgaaatggg aatgactgcc ctggtttatt atgtactggt ttatctggca   1020
gcaaacttag gtgtatttgc agtcatctca attgtggaac aacgtagcaa caaagtggag   1080
atagacgact ataacggact gtacaagacc aatcccaaac tggcttttat catgaccctt   1140
gccctgttct cgctggccgg tatccctccg tttgcgggtt tcttctcaaa gttcttcatt   1200
ttcatggctg cattcaacag cggattccat ctattggtat tcattgccct gatcaataca   1260
gtcgtatcgc tttactacta cttactgatt gtaaaggcca tgtatatcaa tcccaatgaa   1320
gaaccgatcc ccactttccg cagtgataac tacaccaaag tgagtctcgc actttgtact   1380
ttgggtatca tagctctggg tattgcaagt tgcatctatc agggaattga caagttctca   1440
ttcggaatgg gaatgtaa                                                  1458
```

```
<210> 801
<211> 381
<212> DNA
<213> B.fragilis
```

```
<400> 801
acatactatt ggattatgaa ttttacattg ttagttgtcg ttctgctgac cgcaattgcc     60
tttgtcggtg tggtgatagc cctttcaaac gctatctcgc cgcggtcgta taatgcacaa    120
aagttcgaag cgtatgaatg tggtatccct acgcgcggta aatcatggat gcagttccgt    180
gtagggtact acctgtttgc cattctgttt ctgatgttcg atgtcgaaac agtatttctg    240
tttccctggg ccgtcatagc ccgtgacctg ggacctcagg gattgattag tattctcttc    300
tttttagctg agttgggtct gggcccttgc ctatgcctgg aagaaaggag cactgtaatg    360
gaaataatga aaaagcctta a                                              381
```

```
<210> 802
<211> 198
<212> DNA
<213> B.fragilis
```

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<400> 802
gcggaggccc ggtttcgcaa atcctatcat gtggtgaacg gagtagacaa gattctcccg     60
gtcgatgtat atattcccgg atgccctccc cgcccggaag cattttatta cggtatgatg    120
caactgcaac ggaaagtgaa gatagagaaa ttcttcggag gagtaaaccg gaaagagaaa    180
aaacctgaag ggaaatga                                                  198
```

```
<210> 803
<211> 1557
<212> DNA
<213> B.fragilis
```

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<400> 803
gagaatacgc gcagattttc acatctgccc gttcggcaga tgcattgtct gcccgattcg     60
gagatacata ttggtttttat gcagacttta gataagatgg aaaagataaa atactgtttt    120
agcatgatag ggctgctctt cttgtttgca gcttgtcaag agaaggtgac atcccctgcc    180
agggtggata cattgccatc gatatttccc gattatgtcg gggttaccat tccctctacc    240
attgccccgc ttaacttccg ggtgacggac gatggggtag aggcggttga tgtcgtgatt    300
gccggtacga aaggaaagcc tgtacggctg aatggaagat tggtagacat tcccgccaag    360
caatggcacg aacttcttga aagtaataag ggagacagta tcgaggtgaa agtctctgtc    420
cgccagggga agaagtggaa agagtatcgt ccgtttccga tatatgtcag tcctttcccg    480
atcgattacg ggttggtata ccgtttgctc gcacccggat atgaagtgta cagcaagatg    540
gggatctacg aacgtgaact ttcaacattc cgccagactc ctttatttga gaatacgcag    600
gtgacggccg cctgcatcaa ttgccatgct ttcaaccgga cggagcccac accgtcgagc    660
gtacatgtaa gaggcgggca tggagccact gtaatcgaca caggagatcg gttggaattt    720
ctcgatacca aagccgacgg gcaattgtcg gcctgtgtct atccgtactg gcatccttcg    780
ggcgaataca tcgcttattc ggtgaacaaa accaatcagg cctttcatct gggaggaaag    840
aagccgatag aggtattcga ccaggcttcg gatgtggtgg tttatcatcc ccggtcccat    900
```

```
cggatactga ctactccttt gctgagtacg gcttcgtttg aaacttttcc ggcattctcg    960
cccgacggac gaacgcttta tttctgttcg gccgagcaga aagagatgcc tgtccgatac   1020
aaagacgtga aatacagctt gtgcagcatt gctttccatc ccgaagacgg aacgttcggc   1080
gaccggatcg atacgttgat ctcagcccgc acgctggaca aaagtatctc tttccccaaa   1140
ccttcgttcg acggaaaata cctgatgttc acgctttccg attatgggaa cttctccatc   1200
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gaggaggtga acagtgacga cacggaaagc tatcacaact ggagcagcaa ttcacattgg   1320
tttgtgttca gcagccggag aggtgacggg ttgtacaccc gcctttatat ctcctcggtg   1380
gacggacagg ggcgtatagg gaaacctttc ctgctgcctc agcaagatcc gtatacgttc   1440
tacgatcagt tgatctattc gtataatgtt cccgagtttg tgtctgttcc ggtgcaatgg   1500
gacaagcggg agatggccaa agggctgatg tcgaaggagc gagttaaagt gaaataa      1557
```

<210> 804
<211> 756
<212> DNA
<213> B.fragilis

<400> 804

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tgccaatgca gccgtaataa tggccaagaa gttgataaac gcctgttgaa tatgccactg     60
atgaattccc atattgttga agagtgtctg cctttcactt cgttgagact cgatccggag    120
gatattaatc tttcaatggg agccggttac gtgcctgatg cggagataca ggcaatatct    180
gatgcattgg aaacagagat tgccggaatt tgtacacccc gctttctgta tgctctgttc    240
gatgccgagc cggccggtac ttgtgaggtg ggagtaaacg gtatttctct gaaaacagga    300
tctgttataa ctccttatct taaagatgct gcgggctatg tactctttgt tgctactgcg    360
gggtacgagt ttgaggcttt tcagcatagg ataggcagtc agggagacat cttacgcgaa    420
tttcttctgg atgcttacgg ttcggcaatt gctgaagcag ttgtccgtga agtatgccgg    480
aaagtggaat cccgaatgtt tcctttggga tacggagtca gtcatcctta cagtcccggt    540
tattgcggat ggcacgtcac gcaacagcag ttgcttttca gctgcttgcc tgaatttcct    600
tgcggggtcc gattgagtga ttcttcgctg atgtcgccta ttaaatcggt cagtggtatt    660
attgcttatg gtccatgtat tgtcaaacgg aaatatggat gcgaactatg cggcaaagcc    720
gattgctata aaaacagaaa taaactaaac agatag                               756
```

<210> 805
<211> 345
<212> DNA
<213> B.fragilis

<400> 805

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caacaaaaag ggaagaattt gaacttaaaa actgaaaagg agacgcttat gggatcaaag     60
aaaacagact taatgcgtat ttcatatttt gtagccatcg tgatattggt atgtctgata    120
ggtaatctca aagacctttg gctacaatcg tggaccgacc tgatcatcta tctgatagtc    180
ctgtttgccg ccgccgaatg tctgttcagt acgtttgcac gcatccgtgc ggtcggagag    240
caaaaacagc cccgttggct gacttctatc tccctgctga tttacggaat cctttttcctc    300
ggaactctat tttttatcgg agatttctta ataaacaagt tatga                     345
```

<210> 806
<211> 519
<212> DNA
<213> B.fragilis

<400> 806

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aagaatatgg gacttacact tgaaacagta gtattctact ttctggcagt gttcatcatt     60
gccatgtcca tactgacagt gaccacgcag cgtatcgtgc gttcggccac ttacctgctg    120
ttcgtgcttt tcggcacagc aggtatctac tttctgttag gatacacttt cctcggatcg    180
gtacagatca tggtctatgc cggaggtatc gtagtgctct atgtattctc catcctgctg    240
acgagtggag aaggcgaccg ggccgctcac ctgaaacgaa gtaaattcct ggcagggctt    300
gtcactacga ttataggtgc aatcctggtg ctcttcatta cactgacaca caaatttgtg    360
ccgacaagcg atccggaacc tgtagaaatc agtatcaaga ccatcggaca tgctttgtta    420
agcagtggta aatatggata tgtattgcct tttgaagcag tcagcattct gttgctggcc    480
```

tgtatcgtgg gcggattatt aattgcacgt aaaagatag   519

<210> 807
<211> 2799
<212> DNA
<213> B.fragilis

<400> 807
actactttta tggataacga tattgaacga tttcggcaaa tggcgtccat ggcgcaactc   60
ggatggtggg aagctgattt cacagccggg cattatgtat gctcagaata cctctgcgat   120
ttattgggac ttgaaggaaa taccatatct tttacggact tcaggaaacg ggtgcgtgag   180
gattatcagg aacagatagt ccgggagttc aatgcttcca tccataggga gttttatgaa   240
cagactttcc ctattcactc caaagaggga atcgtgtggt tgcacacccg tttgggggag   300
cgtgaagaaa taccgggcag gggagtcgtt tcattcggta tcatgcagcg ggtagaagct   360
cccaatgata cttccgagcg ggttctggag cgtgtcaacg acttgctgta caggcagaac   420
tccatttccc attcactctt acgctttctc aaagatgata gtgtggacct ctgtatcatg   480
gagatattga aggatatcct cgatcttttt catggaggac gcgtgtatat ctttgaatat   540
gatgaatatt accgctatca ggactgtacc tacgaggtgg tggccgaagg agtgttgccg   600
gagatcgata gcctgcaacg tatcccgact gacagtttac cttggtggag gcagcagacc   660
ctgtcgggta aaccggtgat actggattca ttggaccagc ttccgaaaca tgcaaaagcg   720
gaatatgcga tcctgagccg ccagaacatc aagtcactga tgatcactcc gctgatagcc   780
ggcgaacatg tatgggggta tatggggatc gatctggtga agaattatcg caactggaat   840
aatgaagact tccaatggtt atcgtctctt gccaatatca tcagcatctg tatcgagctg   900
cgtaaagcga aagacgaagc tgtgcgcgaa cgttcttttt tgcgtaatct gttccgcttc   960
atgccgatgg ggtatatacg tatgactatg gtccgggatg ctgccggact accttgtgat   1020
taccggatag ccgatgccaa tgatttgagt tcggaactca taggaatgcc tctttccgat   1080
tacgtgggat gccttgccag cgagttgcat gcggacttta aggccaaggt ggattatctt   1140
ctcgatgtga tggagggcag tgtgcacaaa gagactgatg tctacttcca tcgcacccag   1200
cgcagttccc attgcatcgt gtattctccg gaaaaggacg aggtggtcgc tctgtttctg   1260
gactctacgg agacgattcg tgcccatagg gctttagatc gcagtgagaa gcttttcaag   1320
aatatctttg ccaatattcc cgcgggagtg gagatttacg ataaggatgg caatttgctc   1380
gacttgaaca actgggatat ggaaaccttt ggtgtaaaag ataaagccga tgtaatggga   1440
gtcaacttct ttgagaatcc gaatgtgcct cttgaaatca gagaacgggt acggaacgaa   1500
gacctggtcg atttcagact gaactactct tttaataagg cttccgatta ctaccattcc   1560
gataaaagta atataatcga gctgtataca aaggtcagta aactctttga cagccaaggg   1620
aacttcaacg gctatgtgct gatcaacatc gataatacgg agcgtatcga tgccattaac   1680
cgtatccgtg attttgagaa cttcttcctt ttgatatcgg actatgcaaa agtaggttat   1740
gccaaactga acctgctgag taaacgtggc tatgccatca aacagtggtt taagaatatg   1800
ggtgagacgg aggatattcc gctttcatcc gttgtgggcg tttatgataa gatgcatcct   1860
gaagaccggc agaaggtctt tgacttttac gagaaggtat tggcgggtga agagaaggac   1920
ttccgtagcg aaatgcgtat cctgaaaccc ggcgctacca acgagtggaa ctgggtacgg   1980
atgaatgtgg tagtaaccaa gtttgaaccg gagcatgggg aggtggagat tatcggcatt   2040
aattatgata ttacggaact gaaggagacg gaagccatgc ttatcgaggc gaaagagaaa   2100
gcggaaaaca tggatcggct gaagagcgct ttcctggcga atatgagtca cgagatacgt   2160
acaccactca atgcgattgt cggtttctcg ggcctcttgg tcgatacgga agacatggag   2220
gaacgctgcg aatacatcaa gatcgtacaa gagaataatg acttgctgct gcagctgatc   2280
tcggacatcc tggacttatc gaagattgag gccggtacgt ttgagttcac ctacggggag   2340
acggatgtga atatgctttg tgaagatatc gttcgcagct ctcagataaa ggttccccag   2400
ggagttgaat tagtattcga tccgcatcct tcggattgca ctgtgataag tgatcggaac   2460
cggttgcatc aggtcatctc caatttcgtg aacaatgccc tgaagtttac ctcctcgggc   2520
agcatccatg tgggatatga aaagaaggaa gagggtgtgg agttttatgt aagcgacacg   2580
ggaatcggaa tctctaaaga gcaactgacg catatctttg aacgctttgt gaagctgaac   2640
agctttatcc acggaaccgg gctcggactc tccatctgta aaagtattgt ggagcagctg   2700
ggcggcgtca taggagtgga ctcggaagaa gggaaagggt cccgtttctg gttcaccatt   2760
ccctatatta acagcgaaca gtcaatcgtt aacgattga   2799

<210> 808
<211> 558
<212> DNA

<213> B.fragilis

<400> 808
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ataaagtcta tcccgtatga agacttcatc gacaacgaat cgttggaaaa gatggtcaaa    60
gaactcaatg aaggcggtgc aaacgtcctt gtgggagtac ttgacgatct tatcaactgg   120
ggacgcagga actcgctggg gccacttact ttcgcaacca gttgttgcgg tatcgaattc   180
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<400> 809
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<212> DNA
<213> B.fragilis

<400> 810

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<210> 811

<211> 1464
<212> DNA
<213> B.fragilis

<400> 811
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<212> DNA
<213> B.fragilis

<400> 812
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<212> DNA
<213> B.fragilis

<400> 813
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<212> DNA
<213> B.fragilis

<400> 814
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<212> DNA
<213> B.fragilis

<400> 815
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ggggtagata cgcaaaagat actgcctttc ggtactcccg atgagatacg tcgccatgta    1140
atggggcagt gtgagatatt gggccgtgac ggaggttttg ttttcaatgc tgtccataat    1200
gttcaggcca atgttccggt agacaatgta gttgcgatgt cgatgctct aaaggatatc     1260
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<210> 816
<211> 1155
<212> DNA
<213> B.fragilis

<400> 816
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gatgaagtgg aatatgctcc tttggcggtt acaagggtat ctaccgtact tgaccgtgag    180
cagggcattg atcaggctaa tcttgcacag tacatcatag tgcaaggtac gggactgaat    240
gctgttaatt caattctggt gaatgatgtg caggttgatt tgaaagacgc atacatcact    300
tccggagaaa ttacttttcc gattccaaga gtgattccgg agaaataaaa taatctgata    360
actttaggga gtggaaattc tacagtgaca gctccgatat cagtgtttat ccccgaattg    420
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gaagtgaatg gaatgttcaa tgaatttaca ccggccggtg atacaatgaa agtagtcggc    480
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gaagtgaaaa ttacaaaatc aacgggcaac agcttgagtt ttgtattgcc ggaagatgct    600
gtaatgggat caaaaattaa attagtcagt ccggtttgtg gagaggtaac ggttccaggt    660
aaatatatgg aaaaaggtaa catgctgtgt gactttgatc cgtttaccgg ttggggaggt    720
agtaaatatg tgatagatgg tcctgtgcct gctccgtaca gtggatactt ctcccgtttc    780
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tgtgctgtcg aatattctcc ggaggttatt gccgatcaaa ataaatattt gctgaagttt    900
gaagtaaata caatcaaacc attgactaaa aggcagattc gtttctattt ttcacagatc    960
aattacgatt gggaaccttt tgcatcggga cttgctctga atacaaatgg agaatggaaa   1020
accgtttcta ttgatctggg agagatgtgg aaaggagata ttcctaatga tggagtcctg   1080
cagattatgg gtaatagttg ggcggaagat acagatatct gttttgataa tttccgtatc   1140
gttcccaaag attaa                                                     1155


<210> 817
<211> 2061
<212> DNA
<213> B.fragilis


<400> 817
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aatgaaccaa catatagctt gctaaacgcc atcaattatc ccaaagacct gcgccaactg    180
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tcgtgcaacc cgggacactt cgctgccagc ctcggtgtgg tagaactgac tgtagcactg    300
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aagttccgcc atatcgtaac gatagaagat ggaatcatta aggaggtat gggatgcgcc   1860
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gatcagttca ttgaacacgg atcggtgcag caactctacc acttgtgcgg gatggatgaa   1980
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<210> 818
<211> 1539
<212> DNA
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<213> B.fragilis

<400> 818
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aaaatgacaa actacagatg gacgatttgc gccatgttat ttttcgcaac aactataaac     180
taccttgatc gccaagtact atcgctgacc tgggacgaat ttatcaaacc cgaatttcat     240
tggaacgagt cacattatgg catcattact gctgtctttt ctattgtata tgccatttgt     300
atgctgtttg ctggccggtt tatcgactgg atgggaacaa agaaaggtta cctttggtcc     360
atcggtatat ggtcggccgg tgcctgcctt cacgctttct gtggaattat aaccgaagaa     420
tatgtaggaa tgcatagcgc agccgaacta atcgctgcta ccggtgatgt agtagtggta     480
cttgccacca taagcatgta ttgtttttta gtcgcacgct gtattttagc actcggtgaa     540
gccggcaatt ttccggctgc cattaaagtt accgccgaat atttccccgaa aaaagaccgg     600
gcttacgcta cttccatttt taatgccgga gcttctatcg gtgccctgat tgcccctctc     660
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tttgtaaact cagccgaact cgaatatatc gagcaagaca aacatgaaac ctacacagca     840
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caaacctggg catttgcatt cggtaagttt atgacggatg gagtgtggtg gttcttcctt     960
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tttgtacatg ccgacaaaac tcaaatggta tttatgggct ttatcgggaa accggctggt    1440
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<210> 819
<211> 2463
<212> DNA
<213> B.fragilis

<400> 819
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ttgcattttt atgacctgaa taagaatggg cggatggaca cttatgaaaa cccttctgct     180
cctgtggagt atcgtgtgga gcatcttttg tcacagatga ctttggagga aaaggtagga     240
cagatgctta cttcattggg gtggcccatg tacgaacggg tgggagagga catccgcctg     300
acccctcagt tggagaaaga aatcggagag taccatatcg gatcgctctg gggggttatg     360
cgggctgatc cgtggacgca acgtacgttg cataccggac tcaatccttc gctggctgcc     420
cgagcgtcca atcgtcttca atcttacgtc atagaacata gccgtttggg tattccgctg     480
tttctggcgg aagaatgtcc gcatggccac atggcgattg gtgcaacagt atgtccgact     540
tccatcggtc aggcaagtac ctggaatccg gaactgatcc ggcagatggg acgtgtcatt     600
gctattgaag caagtgctca gggagcacac atcggctatg gaccggtact cgacttggcc     660
cgtgatccgc gttggtcgcg tgtagaggaa acttatggag aagatcctta tctgaatggg     720
gtgatgggaa ctgctctggt acgtggtttt cagggagaga cattaaacga cggtaaaagc     780
gtgatagcga ccctcaaaca ttttgcttcg tatggctgga cggaaggcgg acataacgga     840
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tttgtcgtgt ccgatttgta tgctgtcgga ggattacggg aacatggtgt tgccggcaat    1080
gactatgagg cggccataaa ggccgtgaat gccggagtgg atagtgattt gggaacgaat    1140
gtctatgctg agcagttggt tgctgcggtc aaaagagggg atgttgctgt agcaacgata    1200
gataaggcgg tacgtcgcat tttatctctc aaattccaaa tgggattgtt tgatgatcca    1260
tttgtagatg aaaagcaggc agtacaactt attgcctctt ccgaacatac cggactggct    1320
cgtgaagtag cccgtcagtc aatcgttctg cttaagaata aggacaagct gttgccgttg    1380
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aagaaggata ttcgtaccct tgctgttata ggtcccaatg ccgataatgt gtataatatg    1440
cttggagact atactgctcc tcaagccgat gggactgtag tgacagtctt ggatggaatt    1500
cgacaaaagg tctctaaaga aactcgtgtg ctgtatgcca aggggtgtgc agtgcgtgat    1560
tcttcccgta ccggatttaa agatgctata gaaacagccc gtaatgccga tgccgtagta    1620
atggtgatgg gaggatcgag tgcccgggat ttttcctcgg aatatgaaga aaccggtgcg    1680
gcaaaagtca ctataaatca gatcagtgat atggaaagtg gcgaaggcta tgatcgagcc    1740
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ccggtggtat tggtattgat taaagggcgt ccgttattga tggagggagc tattcaagag    1860
gcagaggcaa ttgtggatgc ctggtatccg ggcatgcagg gagggaatgc tgtggccgat    1920
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gaaccgggta ctcctcgtta tcctttcggt tatggtctta gttatacaac ttttttcctat    2100
acggatatga aagtgcaggt aactgaagga agtgatgatt gccgggtaga tgtaacagta    2160
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taa                                                                   2463
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<210> 820
<211> 1662
<212> DNA
<213> B.fragilis

<400> 820
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tacaagacca gcccaataat tccaccggga gggcatttac ccattcagcc aaagaaagga    120
tattcgaacc ttccccggat tttcagcgtg agaatagaga ccacgtcgcc catatacacc    180
gacaagggca gcaagacgat cgcatcgacg ttgccgggca accgggcaca ttctttcgat    240
gggtggatta catccaccgg ccggatatcc gccaatgcgc ccaaagcggg accgccgcgg    300
ccggtggtga ccgacggggt ttaccggcgg acagaaaaac tcaatatcac ctccgtgtca    360
acggagtcgg gcatcgtatg caatatcggg tttgacgaaa gcctgatgta tgaagcctgg    420
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gcagcccttg cccgtcacct ggaggaagtg atgcgctacc aaaccccggc ggattatcac    540
gtgttccgca tacaggtggc gtctgaaacc ctggaagaga cggagtatcc ggagttcatc    600
aaccccatag ggtcggacgg gaagacgtac gccctgctga aggaagcacg gaccgagagg    660
gttgtcatat cgggccaggc cgtagatgta aaggttcccg caggatacgg gatatcgccg    720
ttcctgaagg tatcccgcat attggagatg atattctcgg catacggctt tacattggtg    780
gagaatccct ttgccaccga ttaccagctc agcaagatgg tcgtgctcaa caatgtggcg    840
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gagttcctgg acgcgctgtt ttgccgtacc ggggccaagg tttacgtaaa tgccggccgg    960
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gcgggcacat cgttcaagga agccgaaccg gcggcggact cctttgagaa attccttaag   1140
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ggatatctgg cggggggcggt caacatcaac acaaccctca gaggggccgc caaggagcag   1440
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ataggggccg gggcccttgt ggaggagtat tatttcggca gctcactctg ccgggagccc   1560
aaaggcgaat actttcagga ccccggggggg aatgtttaca ggtattcact ggttttcaag   1620
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<210> 821
<211> 216
<212> DNA
<213> B.fragilis
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<400> 821
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ccggtggatg taatccaccc atcgaaagaa tgtgcccggt tgcccggcaa cgtcgatgcg     120
atcgtcttgc tgcccttgtc ggtgtatatg ggcgacgtgg tctctattct cacgctgaaa     180
atccgggaa ggttcgaata tcctttcttt ggctga                                216


<210> 822
<211> 534
<212> DNA
<213> B.fragilis


<400> 822
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gaagactttt tctgggcagg tactaatgcc gctaccgaag accagaactt tgtaatctac     120
tcttacccgt atacagataa ggataccttt acgaaagagt tctttatcca taagcgagat     180
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aaagccagcc accgtattat cactacagaa gtatttattt actcacccga taaaatgaaa     420
cgtgacctga tgcgccgatt ggaagcatct ctgtatactt tgcaacttcc taccgagaag     480
gcgcaggaac agattccgat gggcatagag caggaggaga aaactaacaa ataa           534


<210> 823
<211> 246
<212> DNA
<213> B.fragilis


<400> 823
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ttctggatgc attctgtcgt aaaattcttc tcttacgttc aagatgtgcg tagttgtctg     180
tttatcaagt taccgttaag actctccata gcctgcctct ccacttattt ccacattctt     240
ttataa                                                                246


<210> 824
<211> 1155
<212> DNA
<213> B.fragilis


<400> 824
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atgaatgaac gtaaaattat acatatcgat atggatgcct tttatgcttc tgtggagcaa     120
agggatcatc ctgaattgcg tggtaaaccg cttgccgtgg ggcatgccga ggagcgggga     180
gtagtagcgg cagcaagtta tgaagctcgt cgttatggag ttcgttcggc tatgtcgtca     240
caaaaggcga aacgtctgtg tccgcaattg attttttgttc ccggacggat ggaagtgtat     300
aaatccgttt cccgtcaggt acacgaaata tttcatgagt ataccgatct gattgaacct     360
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cggggaaata cactaactct gaagatcaag tttcatgatt ttagccagat aacacgaagc     960
atgacacagg cacaggaact tacgaatctt gagagaatct tgcccccttgc caaacaattg    1020
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cctagagaag aagcggatga acatcgggga gtatgggaac aactgagttt tgaatttagt   1140
gattggggaa aatag   1155

<210> 825
<211> 189
<212> DNA
<213> B.fragilis

<400> 825
cgatgtttat caccgtcgcg gagttcaagc gcttcgtgtt caccggtcga tgcacccgat   60
ggaacggatg cacgtcccat aatgcctgat tccaatacta cgtctacttc tactgtaggg   120
ttacctcttg agtcgagaat ttctcgtcct gtaattttt ctattttcat tgtttctctt   180
gttttttag   189

<210> 826
<211> 3333
<212> DNA
<213> B.fragilis

<400> 826
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aaagaaatcc aaccctgggt agacaagatc aaagccgctt acccggaggt tgctaagctt   120
gacaatgacg gcctccgtgc aaaaacagag gaacttaaag aatacatccg taactcggca   180
agtaaagaac gcgccaaggc cgatgaactc agagccggca tcgaaaatgt agagctggaa   240
gaccgcgaag aggtatttgc tcagatcgac aaaatcgaaa aagaaatatt ggaaatatat   300
gaaaaagcac tcgatgaagt attaccggtt gctttctcta ttgtaaaaga atcggccaag   360
cgtttctctg aaaacgaaga aatagtggtg acggccactg actttgaccg gacattggca   420
gcaaccaagg actttgtccg catcgaaggt gacaaagcca tctggcaaaa ccattggaac   480
gccggcggca cgacacggt gtggaacatg gttcactatg acgtacagtt gttcggtggc   540
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aagaaagagg tggaagaagg attccttgcg ttgttccgca gccacaaggc actgcctaaa   1140
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gaactggaaa atgaacatgg attgagcgac gaacaaaagc ttgaaaagaa agatgcctta   1440
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ccgatagccc gtaaggatat gaacgaccgc gtttacaaga cgaaacgtga aaaatataaa   1860
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aacgtactga atgcgaaact ccaccagaag gaagcagaca ttgttgccaa ggccggtttg   2040
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ttcttcgttt cactggaaga tgacctgatg cgtctcttct cttctgaccg catcgccagc   2280
gtgatggata aactgggatt ccaggaaggt gaaatgatcg aacataaaat gatttcaaac   2340

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tccatcgaac gtgcacagaa gaaagtagaa gaaaacaact tcggtatccg taaacgtctg    2400
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gcccttatgg gtgagcgtat cggaatggat atcgtcaata tgatctggga ccgttgcgcg    2520
gccgcaatcg aaaacaatgc agactacgaa gaatgtaaac tggacttgct ccaaacactc    2580
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gacaaaacat tcgatgtggc aatggctaac ttcaagcgca agacagaacg tctggcacaa    2700
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tttgacaaca tggtaaacaa gatcaataac cagacagtgt ctatcctgat gcgcggccag    3060
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caggcagctc ctgagcaacg ccaggacatg agcaaatatc gcgaacaaaa acaagacctg    3180
aatgatccga atcagcaggc cgctgcccag caggatactc gcgaagccgt aaaacgcgaa    3240
ccgatccgcg ctgaaaagac agtgggtcgc aatgatcctt gtccgtgcgg aagtggaaag    3300
aagtacaaaa actgccacgg acggaacagt taa                                 3333
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<210> 827
<211> 1206
<212> DNA
<213> B.fragilis

<400> 827
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gaagcagagt cactgagttt tattgataac ttgaaactga aagcatcata cgtattcctg      60
ggtaacaata atatcggtaa ctacccttat cagtccactt acgcacttgg aaaggcgatg     120
aactatgtat tcggaggtgt gtatacacaa ggagccgcag tgaccactta tgtcgatcct     180
acactgaaat gggaaaagac ccgtaccacc gatgtcggta ttgaaacagc tttctggaac     240
aataaattga cattcaacgc tgcttacttc tatcgtaaaa cgacagatat tctctataaa     300
ccgagtgcaa gttactcttc tatctttggt ctgggacttt cgcaggtcaa tacaggaagc     360
cttgagaaca aaggatggga gtttgagatc ggtcatcaga acaagattgg tgagtttagt     420
tatcatgtga atggaaactt ctcgataatt aaaaacaagg tgatcagcct gggtgtagga     480
gatgtggaac agaaaagcgg aatgataggt aacggtagcg acctgttcct gggttatccg     540
atgaatatgt tttatggcta taagacggat ggcgtattcc tgaccgatga cgaagtaaaa     600
gaatggcacg atcagagcaa gattgctcct aactccaaag ccggtgattt acgctatgtg     660
gacatctccg gtgacggaaa ggtggacgaa tccgataaaa cttatttagg atcaaagata     720
cctcagtata cgtttggctt aggactgggt gcggagtata agggatttga tttcaatata     780
ttgcttcagg gagtggccaa ggtaaaaggc cagttgacca attatgccgg ttatgctttc     840
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aaccgatatc ctaaatatcc tcgtctcgaa gtgatgtcga atgcaggtag caacaatacg     960
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ggatatacat tgcccaaacg tataactcag aagttcggtt cttccaacct tcgttttat     1080
atatcacttg ataatccatt ctccatcagc ggatatcgta aaggctggga tccggaaatt    1140
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ttttga                                                                1206
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<210> 828
<211> 1050
<212> DNA
<213> B.fragilis

<400> 828
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atttggctgg ctatcctgct gttgggaaca atttggatac tagcccaacg aaataaacaa     120
ataccttaca acagtatcaa tgggcttgta ttcggcacag tatataatat tacctatcaa     180
tatgatggca atctgaaagc ggagatcgat gccgaattaa aaaaattcga cggttcactt     240
tctccattca atgatacatc tgtcattacc cgtgttaatc gtaatgaaga atcgtcaca     300
gacactttct tccaaacctg tttttaaccga tctatggaga tctcagccga aactcgcgga     360
gctttcgata tcacagtagc tccattagcc aatgcctggg gattcggttt caaaaaagga     420
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gccttccccg actcgatcat gatagatagt ctactccaaa tcacaggata ccaaaaagtt      480
aaactggaaa acggcaaagt gatcaaagaa gaccctcggg tgatgctaag ttgtagtgct      540
gtagccaaag gatattccgt agatgtagta gcccggtatt tggatagcaa aggtatcaaa      600
aactatatgg tagatatagg tggcgaactg gtggtaaaag gggtgaatcc caaagaggaa      660
gcatggagaa tcggcataaa caagcctgta gacgattcct tgtcgcttaa ccaagagata      720
caaacaacat taaaactgac caatgtaggt atagcaactt ccggaaacta tcgcaacttt      780
tactacaaag atggcaagaa gtatgcccac accatcgacc cacgtaccgg atatccggtt      840
caacataata ttctttcagc aaccgtagtt gccgacgatt gtatgactgc cgacgcatta      900
gccacagctt ttatggtaat ggggctggat gaagcggaag cttttacaaa atcacacccc      960
aacataggtg cttatttat ctacagtgat gaaaaagggg aggtgaaaag ctattttaca     1020
aagaacatga agcaatatct tgacaaatag                                      1050


<210> 829
<211> 1629
<212> DNA
<213> B.fragilis


<400> 829
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aacaaaattg atatgacaaa cgaacgaatg aaattactga actgcacatt gggattagtg      120
gcaggggtgt ctttgccggt aagtgctttg ccgtacctc agcctgccca ggatcaaaca      180
gagaaacaac ccaacatcat cctgattgtc gccgatgact tgggatacgg agatttaagt      240
tgttatggcg cacaccggat tcaaactccg ggtatggatc gtatagccaa cgaaggtatt      300
cggtttacgc agggattttg tactgcagcc acatctaccc ccagccgcta ttcggtgatg      360
accgggaaat atccctggag caatgtggat gctaaaatct taccgggtaa cgccgcattg      420
attatcgata ctcaaaaaat aacgttgcct aaacttatga agcaggcggg atatactacc      480
ggttctgtcg gtaaatggca catcggccta ggagatgggc atgtggactg gaataaggag      540
gtgcatcccg gagccgctga gatcggttac gactattcgt ttattcaggc agcaaccaat      600
gatcgcgttc cttgcgtctt tctggaaaat ggaagagttg tcggattgga tccgaatgac      660
cctctttatg tggattaccg gaaaaacttc cccggtgaac ctaccggtaa agagaacccc      720
gaattgttgc gcatgcatcc cagtgtggga catgcaggct ctattgtgaa tggagttccc      780
cgcattggtt ccagaaagg tgggaaggct gcacaatgga aagatgaaga aatggcagga      840
ttattcctgg acaaggccag gcagtttgta gatgacaata aagacaagcc tttcttcctt      900
tattacggac ttcaccaacc gcatgtacct cgtgttccca atgaacgttt tgtaggaaag      960
tcaggcatgg gaccccgtgg tgatgtgatt ctggaggcag actggtgtgt tgatcagttc     1020
ctgaaagagt tggataagtt gggattggcg gagaatacca ttgtgattct gacgagtgac     1080
aatggtccgg tgctcgatga tggttatcaa gatgatgcgg tagagttggt gggtgatcac     1140
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ccgttcatgc ttcgttggcc tgcaaaggtg aaacctcagg tgtcagatgt atttgtctgt     1260
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gatagcgaaa acacactcga tgcttttctg ggcaagagta aaaaagggcg taaagagttg     1380
gttattgagg gaatgttcaa ttatgcctat cgtcagggag attgggcgct gattcctcca     1440
tattacaatc cttatagcaa ggaagacggt gacttcatcg gtttgggtta cggttataag     1500
ttgtataatt tgaagtcaga catcggtcaa caaaagaatc tggccgagaa gtatcctaaa     1560
aagttgggtg aactgatcaa tcgttttgag tatctgaaag ctcactccga caaagtgacg     1620
agattttga                                                            1629


<210> 830
<211> 1626
<212> DNA
<213> B.fragilis


<400> 830
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acttatccct tccattacac tcctcatccg ttatgtgtaa tggcagcagg agaagtacag      120
gcttacataa ataagcagac aagatggaaa gaagaattgg acaaaggaaa aatgttcggc      180
gtattgatag tccgtacttc taacggacaa acgggatatt tggctgcttt ttcgggtaat      240
ttgtgcggaa gcaattcaca ctctttcttt gtaccgccgg tatacgatct gttgaaaccg      300
gatggtttct tcaagataga agaagaacaa atctcggcta tcaatcacca aatcggacag      360
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ttacaaaact gtgaccgata tctggaactc caacaaaaga tggagagaga aacagcttcc      420
tcacagcagg cattgtcaga ggccagaaaa gttctgaaag cagcaaaaga gaaacgggaa      480
cagcgcagac ttcaccgacc gaacgaaaat gaacaagttg ccatgattcg cgaaagtcaa      540
taccagaaag cagaattcaa gcgtttggaa agatactgga aagaacaaat ttccgaaata      600
aagacagaac tggaaagttt ctcgtcacag atagaggctc tcaaagccga acgcagaaat      660
cgttcggcag cattgcaaca aaagctattc caacagttca acttcctgaa tgccaagggg      720
gaaactaaaa atttgtgtgc tatcttcgaa gaaaccgttc aaaaaacgcc acctgccgga      780
gcaggtgaat gtgctgcccc gaaactattg caatatgctt atctaagcgg attaagcccc      840
attgccatgg ccgaattctg gtgggggggaa tctcctaaga cagagatcag acaccacggt      900
tattattatc cgtcttgcag aggaaaatgc gaacccattt tgcgacacat gttgcaaggt      960
ctcaatgtag agccagcacc ctcagaaaga tactctttat cacaaaatat gccggagatt     1020
ctttttcgaag accaatggct tttagttctt cataaacccg aaggagtact ctccgtaccc     1080
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ggtcccctcg ttgtacatcg attggatatg gccacttcag gattactgct ggctgccaag     1200
acccaagaag tacaccggca cctacaggcc cagtttgaaa accgaagcat caaaaaacga     1260
tatatagctc tattggatgg tatccttccg gaagaagaag gagttatcga tcttcccatc     1320
tgtccggatt atcttgacag acccagacaa atggtgaacg aagagctagg aaaaacagct     1380
atcacccgat atcaggtgat ggatcggaaa aacggacaga cccgtattgc tttcttcccg     1440
ctgacgggac ggacacatca gttgcgtgta catgcagctc atccgttggg attaaactgc     1500
cctatcgtag gagacgagct ttatggacgg aaggcagaac gcctttatct gcatgccgaa     1560
tatctggaat tcatccaccc cgtatccggg caaagaatgg tcatcgaaaa gaaagctgaa     1620
ttttaa                                                                 1626

<210> 831
<211> 501
<212> DNA
<213> B.fragilis

<400> 831
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ataaagtaca tattctgcat attgataggt atcttttttg tgtatggagc cggttatacc      180
gcttctatag aagaaactgc agaccttccc gccgaagtta ctgccacctt tgtatcacaa      240
tatgccggag accattcttt attcaatgat gagacggctg aatccaaagt gtgtgatgct      300
attcttcccc atagttcttt ttcacgggaa ctaagttctt ccaaaatttt gaaactcaaa      360
ttgcagactg ctatccggct gctcaatgcc tcacttttcc atcaatcgga gaggggagat      420
acttatccgg acttcaatca taacttcatt aaatattcca gcgggtatta tgtatactcg      480
ttagagcata tcctgattta g                                                501

<210> 832
<211> 924
<212> DNA
<213> B.fragilis

<400> 832
gaatcattgc cttatacccca atttgaatac ctaaatatta tggcagacaa ttatatcgaa       60
agacaatacg aacaatatga agccagaaaa gcggcttggg aaaaagcacg caaatatggc      120
aaaaagaaaa cggggatcac tcaccctgct agaactgaac aaccgggcca aacgacaata      180
gagccccatc attataaaag agtatttgtt acgggaggag ccaatggaat tggtaaagcc      240
attgtagaaa tattctgtaa aagtgggtat cgggtggcat tttgcgacaa agacggaata      300
gcaggaaaac gtactgcaga agaaacagga gccattttttc atcaagttga cataagcgac      360
aaggatatgc ttgaacactg catgcaatcc atcattgagg aatgggatga cattgatatt      420
ttaatcaata acgcaggtat cagtgacttc tctcctatca ctgaaacaag catagaagat      480
ttcgacagga ttctatccat taatctacgc ccggtattta ttacttcacg cttcatagct      540
atccaccgtc aatcgcaaac aacatccaat ccgtacggaa gaatcatcaa tatctgctct      600
accaggtatt taatgagtga atccggcagc gagggatatg cagcttctaa agggggaatc      660
tattcactga cacacgcgtt agccttgtca cttgcccaat ccatatcac agtcaattct      720
attgcgccgg gctggataca aacccatgac tacgatcgtc tccgtccgaa ggaccatgag      780
caacaccctt cgagaagagt cggtaaaccg gaagatatag cccgcatgtg tagattcctt      840
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tgtgaagaag gaaatgactt tatcaacggt gaaaacatca cgattgacgg agggatgact    900
aaaaagatga tttacacgga ataa                                           924
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<210> 833
<211> 1623
<212> DNA
<213> B.fragilis

<400> 833
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ctttgcgctt tatcaagaaa aacgactatg ctcaaacgga taccccacac atacaccatc     60
atttcttcgg tcattctact ctgtgcagtg ctttcctgga tcattcctgc cggagaatat    120
gtgcgagaga caatcgacgt aaacggtatt tcccgcactg tcattgtaga ccattctttc    180
caccgggtag aacagacacc ccagacctgg caagtgttca gctcccttct tgaaggcttc    240
gaacgtcagg caggaattat agctttctta ctgattatgg gaggtgcctt tcaaataatg    300
aatagcagcc gtgctattga taccggcatt ttttcatttc tgaatttcac gaaaggactt    360
gaaaaacacc gactgatcaa aatactggga gtaaacaatg tagtgatatc cttagtcatc    420
atccttttca gccttttcgg ttccgtattc ggtatgagtg aagagacact ggccttcgtc    480
atcatcattg tcccacttgc catatcaatg ggatatgact ccatcaccgg gctgtgcatg    540
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tggctggtac tgaccaccgc cctgattgtt tgtgtactca gatatgccgc tgtcgtcaaa    720
aagcatccgg aaaaatcacc tatgtatcat gctgacgctt attggcggaa acgggaaaaa    780
gaaagctgtg gagagatatc ccatgtaacg actcgccaag catggatcgt atacctattg    840
ttactcgtgt ccttgggggtt gttctccatc atctacccga tcagtacttt ttcagtaggt   900
gaagcatcag tcacctgcta tgcagttccc accttatcta tcttgtttgc agttttcggt    960
tggctgggtt tacgcaaatc caaccagttc tttatattga ccttactcgc attcactatt   1020
cttttcctga ttatcggtgt catgggtcat ggctggtatt taccggagat atccgccatc   1080
tttctggcaa tgggcattct ttcggggttt gccaatagtg aacatgcaga tgctatcatc   1140
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ggagggatta ttcaaatact gcaagacgga catatcatcg accccatttt acattctttg   1260
gcttcactga tgggagaagc cggaaaaata gtatctttgg gggtgatgta tctgatacag   1320
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ggcattgccc gcatacctta tgagatttgg gtaaaatggt tgtggaagat acttctttta   1560
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tag                                                                  1623
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<210> 834
<211> 1338
<212> DNA
<213> B.fragilis

<400> 834
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acaactgtgg tagcacagga cgacgctaat tgtaattcga acagtagtat ttctcacgaa    120
gcagtgaaag ctggtaactt taaagatgct tatactccgt ggaaagctgt tttggagaac    180
tgcccgactc ttcgtttcta taccttcaca gacggttata aaattctgaa agggttgctg    240
gggcagatca aagacagaaa ctctgcagaa tacaaaaagt attttgatga gttgatgaat    300
acgcacgatt tgcgtatgaa gtatactcag gaattcttgg gaaaaggtgt aaaagtatcg    360
tcggaagatg aagcactggg cattaaagct gtcgattata ttgcatttgc tccgaaggtg    420
gatgtaaatc aagcttatga ttggttgaaa aaatcggtgg acgctgcgaa agctgagtct    480
gcagctgcta cattgttcta tttcttgcag atgtctcacg ataaactgaa ggaagatccg    540
gctcacaaag agcagtttat tcaggactat ctggctgcat ccgaatatgc agacgatgct    600
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gtagctctgt tcattaacag cggtactgcc gattgcgaat cactgcaagg tatctatgga    720
cctaaggtag aaacgaatca gactgatttg aattatttga agaaagtcat cagcattatg    780
aagatgatga agtgtacgga tagcgacgct tatcagcagg cttcattcta tgtatacaag    840
attgagcctt cggctgaggc tgctaccgga tgtgcatacc aggcctataa gaaagggggat   900
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atcgatggtt ctgtgaagtt ctttgacgaa gcgatcaacc ttgagacaga caatgcaaag      960
aaagcagaaa aggcttatgc tgctgccagt gttttgacta ctgccaagaa attgtctcag     1020
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cttatcgcca acttgtatgc tatgagtcct aactggagtg atgaatcggc tttgaacaag     1140
tgtacttatt ttgctgttat cgacaaattg cagaaagcta aatctgtaga tccgagtgta     1200
acagaagaag ttaacaaaat gatcagcaga tattccgctt atactccgca ggctaaagac     1260
ttgtttatgt tgggctacaa agccggcgac cgcatcacta tcggtggttg gattggagag     1320
tctacaacga tcagataa                                                   1338


<210> 835
<211> 501
<212> DNA
<213> B.fragilis


<400> 835
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ttgatgcata tgaaaaagta cctgtttttac ctcagtatgg ctcttgtagc agtagtgttg     120
ttttcttgta aaagcggcaa gaaaagtgtg tttactccaa cttccagcgg acgtgcttat      180
gaagtcctcg ttgtggttga gaagcctgtg tgggagcgtc ctgccggtag agctttgtac     240
aatgtgctcg atacagatgt gcccggactt ccgcaatcgg aacgttcgtt caggatcatg     300
tctacttctc ccaaagattt tgatgccatc ctgaagttgg tgcgcaacat tattatcgta     360
gatatacagg acatttatac ccaacctaaa ttcaagtatg ccaaggatgt atatgcatct     420
ccccagatga ttttgactat tcaggctccg gacgaggcat cgtttgagaa gtttgtcgaa     480
gagaacaaac agccgatata a                                               501


<210> 836
<211> 1191
<212> DNA
<213> B.fragilis


<400> 836
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tgttctttta gaaaagtaaa aaaacaggct atgacaaaat atccgtatat actgttcgta     120
ttgctcctcg cgtctttcag ttcctgccag actgttgagc aactttccat cgattatatg      180
ctccccgcag agatcagttt tcctaacgaa ctgaaacgag tggcagtcgt aaacaatgtg     240
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gcacgtgatt tcacacccg tgaatcgact ctcagccaag aggaagttca gaccttggca     480
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gaaatcccca actactacct gaccagcctt tatgtgaatg aattaaagga aaggagcaac     1140
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<210> 837
<211> 2022
<212> DNA
<213> B.fragilis


<400> 837
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gccaaccaag cagaaatggg agtggtatat gatgacgacg aacgttacga attaacatgg    240
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gccggagaca caattgaggc ggaatgcaac cagcgtaaat taaaggacct cccggacatc   1620
ggtttccgtg tttttcggat tgccgacagc aatatgaagg acgtgtacta cagtgcaaag   1680
gaatattcac agagtgattt attctatttc actgataata tcaaagaaga ccgtaccgga   1740
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gaagaggata taaatggata tacggtttat tctgtcgaca agaccgaatt aatggcatgt   1860
ttcgcagaac agattcccga aaaagtcttc cgtgaaatag ccggcaggca accacgccgg   1920
gttgtcttcc gggacgcctc attccgtgac agtgccgatc gtatcaatat agacgagata   1980
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<210> 838
<211> 891
<212> DNA
<213> B.fragilis

<400> 838
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ggaagtactg atgatacatt taactttata gaatcaatta aggaaaacga taagattgat    180
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ttacagacta tagtagatgt ttataaacaa gtatctgata atgataactt tgcaggagtg    360
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ttagattgtt ctgcaataga ttataacctg aaatataaat atggtgggga gatggctgtt    480
gcatatagga ctaagatttt gcagaaatat ccattccga ttttttgaagg agagaaatat    540
tgtggggaag gacttatttg gtataaaata gctttgcact ataaattacg atattttgca    600
catccaataa tattgactga atattatcct gatggtctta ctgcattagg agtgaataaa    660
aggatggaaa gtcctaaaac gactttggct acatatagtg agctctctaa aatgaatgtt    720
ccttttaata gtaggatcag gtatattatt aattttttgga gatttttttg ttgcgataaa    780
caaagaggat ttgcatgcaa attgaaattg gttaataagt ctactatttt actattccct    840
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<210> 839
<211> 1293
<212> DNA

<213> B.fragilis

<400> 839
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ctgacatggg gaacggaaag tccgtccacc gctgattcca tccggatcag cctgttgaca   180
tgcgctccgg gtgaagaaat ctattcgctc ttcgggcaca cggctatccg ttacgaagaa   240
ccggcacgag gcatcgaccg ggtatacaat tatggcttgt tcagtttcaa cacccccaac   300
ttcatcctgc gtttcgcact cggcaagacc gattatcaat tgggggtgga agattaccgc   360
tgttttgccg ccgaatacga atacttcgga cgcagtgtat ggcagcagac gctcaatctg   420
acagtcgaag aacaacaaca gttaatcacc cttctggaag aaaattaccg cccggaaaac   480
cggatatacc gctataactt tttctacgac aactgtgcta cccgtccacg ggacaaggtg   540
gaagagagcc tgcaaaaaag cggtagccaa ttgctcttca gcaatgcaca caccgaaaat   600
ggcgaaacga aatcttatcg ggatattgtc catcaataca cgaaaggaca tccttgggca   660
caattcggaa tcgatttctg cataggcagc caagccgacc accccatcaa cgatagacaa   720
atgatgttcg ctccgtttta tctgatggat gcttttgccg gagcacgcat agccaacact   780
tcagacaaca aagcactggt ggcttccacc aaaaaaatta ttgactgtga accggctgta   840
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tatcatctgc tgaactgcac agttttaaca cttttтatag tgcttttтcc ggtaatacca  1200
caaaatttcg acttagcagt attacctttg gcactctgtt tgctgatacg ttctgcaagc  1260
aatcttattc tgacatacaa aaaagctaaa tga .                              1293
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<210> 840
<211> 402
<212> DNA
<213> B.fragilis

<400> 840
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gatcttatta acccaaaaag tccccctgaa tttataagtt caggaggacc tttttgtcat   180
aaagtggagc tggagggatt cgaaccctcg tccaaacgag gaaatcataa gctttctaca   240
tgcttatctt tgcctaagtt tttcgtgcag gagcagaacc aaagccatca attcctgcct   300
tatcctttaa agtttcatca gaagcgcaag gccacttctg actatccccg atgtaactgc   360
accactgaac cggaatgctt cggagcaaca gcttccgagt ga                      402
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<210> 841
<211> 795
<212> DNA
<213> B.fragilis

<400> 841
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gggttgattg aagagggtga caaagtgctt gttggccttt caggaggaaa agattccctg   180
gcattagtcg aattgctggg caaacgttcg catattttca aacctcgttt ttcggtggta   240
gctgtacatg tggttatgaa gaatattcca taccagagtg attgggatta cctccgtgaa   300
catgctgaaa agaatggtgt tcctttagtt gtttacgaga cttctttcga cccttctacc   360
gatacgcgta aatcaccttg ttttctctgt tcatggaacc ggaggaaagc tctgtttact   420
gtggctaaag agcagggttg caataaaata gcccttggac accatatgga cgatattttg   480
gaaactttat taatgaacat tacctatcag ggtgcattca gtacaatgcc accacgtttg   540
gtaatgaaca aatttgatat gaccattatt cgcccgatgt gcctggtgca tgaagcggat   600
ttgttggagt tggcgcaaat aagggggatat cgcaagcaag tgaaaaattg tccttatgaa   660
tcccaatcga gccgtagcga tatgaagggg atactccgac aattggaaaa gatgaatccg   720
gaggctcggt acagtctgtg ggggagcatg acaaatgtac aggaagaatt gttacccaaa   780
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gaagtggagt tttaa   795

<210> 842
<211> 189
<212> DNA
<213> B.fragilis

<400> 842
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agatatattc acccggagga aggttcgaaa aacgaattct attatctaca gacggagcac   120
tccaatccgt atgatcgagt ttccaactgt aagctatatc ctgcttttca gtatagcgaa   180
tggcagtag   189

<210> 843
<211> 1167
<212> DNA
<213> B.fragilis

<400> 843
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ttgcttcact tgagatatga tcgtcatgca atggctggtc atggggagtc gggcagtaag   240
aaccgtagtt tcggtaaaga cggagcggat aagattattg aagttccctg tggtacggtg   300
gtttacaatg ccgaaacagg tgaatatgta tgtgatgtaa cagaacacgg acaagaggtc   360
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caggctcccc gttttgccca gccgggcgaa ccgatgcagg agatgactgt aatccttgaa   480
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acattgccgg agggaattcc tcatgtattc atttcatctg tatccggttt gggcatttcg   960
gtgctgaagg acatttttatg gacggagttg aataaggaaa gcaataaaat agaagctatt   1020
gtgcatcgtc cgaaggatgt cagccgattg cagcaggaac tcaaagatat gggtgaggat   1080
gaagaactcg actatgaata tgaggatgat ggtgatgagg acgatttgga ttacgaatac   1140
gaagaagagg attgggaaga taaatga   1167

<210> 844
<211> 360
<212> DNA
<213> B.fragilis

<400> 844
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gaaaatatta cggccgaaaa gggaagcgat ggtaccgtta ccattgcttt cccccggttt   120
aaatacgagt ggatgcggcg attcttgttg cctaaaggaa tgtctgcgga tattcatgtc   180
cggctggaag atcatggcac tgccgtatgg gagttgattg acggaaagag aaccgtacgc   240
cggattattg aagagctggc agaacacttc aattatgaag aaaattacga atcacgtatt   300
acggcttata tcactcagtt gcagaaagac ggatttgtga aattagtgat tgagaactga   360

<210> 845
<211> 1296
<212> DNA
<213> B.fragilis

<400> 845

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tcaatcatgg agaaatttga ctccatgctt tcacccgtta tcgactcaac actgggtcag    120
agatgcagca gtatcttcgg atatcagttc agcgagatag tccgttcgct gatgagcgtt    180
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acacaggaaa acatctccta tacttccgac caaggcaaga cctatgattt caatactgca    360
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ccgacctaca aaaagttcct cggctacagg cctggcgtat atgttatcgg tgacaagata    540
gtctatatcg agaacagcga tggtaacacg aatgtgcgtt ttcatcaggc agacacccat    600
aagagattct tcgctcttct ggaatcccag aacatccgtg taaatcgctt cagggcagac    660
tgcggttcct gctcgaagga aatcgtcagt gagatagaga agcattgcaa acatttctac    720
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gacattgttg aattctacaa tctgcgtggc ggcaaggaac gtatctttga cgacatgaac    1020
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cctgccaagt ggatcatgac tgcaaggcaa tacgtgctga atatctacac agagaaccga    1260
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<210> 846
<211> 1446
<212> DNA
<213> B.fragilis

<400> 846
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caagtaaaaa cttattcgca gagaaaaatt tctgatttcc ttttcattct ttgggcaggc    180
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ggatttgacg gacttgaagc gtttggaatg gactacaaag tggtagttac catcgcgcaa    300
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ggatgtatgt ggggaatcat tttttagcttt atcgagggaa gacgaatgac ggacattctt    540
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<210> 847
<211> 609
<212> DNA
<213> B.fragilis

<400> 847
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tggcggccta tgctcatcat ggcatttttt ttcggacttt tccaggctat aatgccttta    180
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gattgctgcc aaagatttaa ccctgcaagc ctgaaagtag tgataacaat ggccgttgca    360
accagcattg atgcattggc cgtaggagta tcctttgctt ttctgggtat caaaagctgt    420
tcgtctatcc tttacccggc aggaatcatc ggatttgttt ctttttttat gtcccttata    480
ggattaatct tcggcattcg cttcggatgc ggcattgcca gaaaacttcg tgctgaatta    540
tggggaggaa tcatactgat ccttattgga acgaaaatat taatcgaaca cttatttttt    600
aataattag                                                            609
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<210> 848
<211> 1074
<212> DNA
<213> B.fragilis

<400> 848
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aattcgtatt atgatattaa tttaaagtat ggacgccttt cgagcttagg tgtttctcaa    180
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acctatgcgg atacttcttc tctttcgcgg gaaattggtt ttcaacccaa tacgtccttg    1020
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<210> 849
<211> 1068
<212> DNA
<213> B.fragilis

<400> 849
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aaaaaaattc taaattataa agggttcgtt tcgggaggtt cttccgagac aatgagttgg    60
ttatttatac gtaaattaat ctgtttgcat aaaggtaaaa tcaaatttgc ttataaagaa    120
gaacaaaaac tggtgcttat tttaattttt cctattgtca tccggcaatc ggaaagagtt    180
tctgaattct ccgggatatt atccgtaccg gagctctcca cagggaatgg tgagttgttg    240
tcggttaccg gaatgctgcc gacagtgaaa acttctgagc agaaacgtcc ggataagaaa    300
aaagagaaac attctctggt attggttgaa aggaataagg atttgtgtaa ttatcttgtg    360
caaatcctga tgaaggagta taagattgtg tctgtttgtg atgcggaggc ggcctttgag    420
actgtgtgtg aacaatgtcc ggatgcagta ctggcttctt ctgttcttac ccgtatttcg    480
ggtgaggaac ttgccgttcg gattaaatcg gatgacagag tagcacatat tccggtaata    540
ttgttagtga aaccgggaga ggatgaccgg tacattcaac ggaatgccga tctttatgtg    600
tggatgcctt ttgccatatc atctttaaag actgagattg cagctttgat tgctaaccgg    660
gaaatgatcc gtaagaggta tattcgtttg gccttggggg gtgaggcctc ggaccctatc    720
gataaagagg tagagtcatc agaaggtgat caggagttta ttcgtcaggt gagaagtctg    780
attgaagaga ggatgaccga ttccggattt aagattggtg aactgagcga ctgcatgaat    840
```

```
atgagtcgtt cgagtttta taataagatt aaggagataa ccggacatgc tcctgcggac    900
tatgttcgta atgtgcggct caacagagca ttggtttgt taatgagcag aaagtatacg    960
gtggctgagg ttgcggatat gacgggtttc agtgatccta aatacttcgg gatcgtgttt   1020
aagaaatatt atgggggctc accgacgaag tatataaaca atttatag                1068
```

<210> 850
<211> 492
<212> DNA
<213> B.fragilis

<400> 850
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atcgtcgcct accaactgac agcgatcccc gatgcgttga gtcaatttct tccagccttc     60
ccagtcattt tcgctcatac catcctcaat ggaatcaatc ggatattcgt tgataagttt    120
ttccaaatag tcaatttgtt cgtcagctgt acgttttttg ccttttcac cttcaaattt     180
ggtgtaatcg taaataccgt catgatagaa ttcggaagag gcgcagtcca tgccaatcat    240
tacatctttg cccggttcgt agcctgcagc tttgatagcg gcaagaatag agttaagtgc    300
atcttctgtt ccttccaggt tgggagcaaa accgccttca tcaccaacag ctgtactcag    360
accacggtct ttcaatactt ttttcaaagc atggaatact tcggcaccca tgcgcaaccc    420
ttctttaaaa gaacttgcac ctaccggacg gatcataaac tcctggaagg ctatcggagc    480
atcactgtgt ga                                                        492
```

<210> 851
<211> 960
<212> DNA
<213> B.fragilis

<400> 851
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cttatgtact atctaataat cttagttctg ctattcctgg cagaactttt ttatttccgt     60
attgcggata agtgtaacat tatcgataag cctaacgaac gtagttcgca tacccggatt    120
acactgcgtg gtggagggat catctttat tttggggagt tggcttattt tctcacaaac     180
cactttgaat atccatggtt tatgctggct ttgagtctga taaccttat cagtttata      240
gatgacatcc gttctacttc gcaaggactt cgtctggtct ttcattttac ggcaatggct    300
ttgatgtttt atcaatgggg gctgtttagc ttgccttggt ggacgatcct tgttgccctg    360
atcatttgta ctgggattat caatgcttac aactttatgg atggcattaa tggcataaca    420
ggcggatatt cattgatcat tctgatagca ttggcctaca taaataggat atatgtccca    480
tttgttgaac cggaccttat ttatactatg ctttgcgcag tattggtctt taattttttt    540
aatttccgca aacaagcgag atgttttgcc ggtgatgtcg gttcggtcag tatagctttt    600
gtaatcctgt tcctgatcgg aagtttaatt atcaaaacag agaattttgg ctggcttata    660
ttgcttgctg tatatggagt agatagtgtg ttgacgatcg ttcatcgatt gatgcttcac    720
gaaaatattg gtttgcctca ccggaaacat ttatatcaga taatggctaa tgaactgaga    780
ataccgcacg tagtagtatc gttggtgtat atgattgcgc aaattataat tatcatcgga    840
tatttatatt gccaaaatta tggttattgg tatttattgg gctgtatcct cttgctgagt    900
ggaatatata ttgttttat gcacaaatat tttcacttgc atcttttatc taaaagataa    960
```

<210> 852
<211> 771
<212> DNA
<213> B.fragilis

<400> 852
```
attttatctc ttatctttgc gccctcaaac agagagaaag tgaacttaat tatcgatatt     60
ggaaatacag tagccaaagt agcgcttttc gaccggactt ctatggtaga agttgtttac    120
gactctaatc agtccctgga ttccttggag gctgtttgta ataagtatga tgttcggaaa    180
gcaattgttg ctacggttat agacttaaac gagtgtgtgc tggctcagtt gaacaagctt    240
cctgtccccg tcttatggtt agacagccat acgccgcttc cggtaataaa cttgtatgaa    300
accccgaaa ctctcggtta tgaccggatg gctgccgtgg tggcggccca tgatcagttt    360
ccgggtaaag acattttggt gattgatgcg ggtacttgta tcacttacga atttgttgat    420
tctttgggac agtatcatgg gggcaatatt tcgcccggac tctggatgcg gctgaaagca    480
ctccatcaat ttaccggacg tttgccgttg gttcatgccg aaggacgcat gccggatatg    540
```

```
ggaaaagata ctgaaactgc tattcgtgca ggtgtaaaga aagggataga atacgaaatt    600
acagggtata ttacggctat gaagcataaa tatcctgaac ttttggtttt tttaacgggc    660
ggagatgatt tttcttttga tacgaaatta aaaagtgtca tctttgcaga tagattttta    720
gtgttgaaag gattaaatag aatattaaac tataataatg gtaggatata a             771
```

```
<210> 853
<211> 672
<212> DNA
<213> B.fragilis
```

```
<400> 853
tttattatgt ataccattat tgtatcgaaa gagttaaaag aagcatgtcc tgttttttgca   60
ggggctgcta tatatgctga agtgaaaaac acttcttatt gtgaagggct ttgggaggag    120
attcaatctt tcacagaaat gctcactgca acaacccggt tggaagatat taaaaaacaa    180
cctgtgatag ctgccacacg tgaagcctac aaacgctgcg ggaaagatcc cgggagatat    240
cggccgtcgg ccgaagcgtt acgtcgcaga ttgatgcggg ggattgcttt gtatcagatt    300
gatactttgg tcgatttgat taatctggtt tctctccgga ccggacattc gataggtggt    360
tttgatgctg ataagatagc gggcactggc ctggaactgg ggatcggtaa gatcaatgag    420
cctttcgaag ggatcgggcg tggtgtgctg aatatcgagg ggctgccggt gtaccgggat    480
gctgtggggg gaatagggac tccgaccagt gataacgaac ggacaaagat ggggctggaa    540
acaacacata tattggctat cgttaatggc tataatggta aagaaggact gcaggaagct    600
gccgaaatga tacaaacttt attgaaaaaa tacgctgact cggacggagg aacaattact    660
tactttgaat aa                                                        672
```

```
<210> 854
<211> 1044
<212> DNA
<213> B.fragilis
```

```
<400> 854
atatacgtgt attggacagt aatgatgaat atattagtaa cagggattca tggctttgtg    60
ggttctaact tggttgaagc tttaaaagag aattgtatct tttatgggct tgatattgtt    120
tctcctgcta aagagggagt tgtaactact ttttcttggc tagatatcga acccacatct    180
tttccttttc aaactcttcc ccaattcgat gccattattc atcttgccgg aaaggcccat    240
gatacgaaaa accaatcagc cgctcagtcc tattttgaca tcaataccgg tctgactcaa    300
aagatattcg acttcttttt ggagtcttct gccaagaaat tcattttctt tagttcggtg    360
aaagctgctg ccgatagtgt agtaggagac gtgcttaccg aagacgtgat tccgactccg    420
gttggtcctt atggggagag taagattaag gcggaagaat atataaaaaa tcattttatg    480
tttccaactg tttctattag tgaggatcgg tctttgcggt tggagaaaga gaaggggagg    540
atacccaaga ataaacaggt gtatattctt cgtccctgca tgattcacgg accgggaaat    600
aaagggaatc tgaatttatt atataatgta gtgaaaaaag gaatcccttg gcctcttggc    660
gattttgata atcgccgttc gtttacttca atcgataacc tttgttatgt gattgagggg    720
cttttgaatc aggatgtgct tacgggcatc taccatatgg gagatgatga agctctttca    780
acgaatgaac tgattggcat catgtgtgaa gcaatgggaa aaaagccgca tatctggaag    840
atgaacaaaa gggttatgga aggatgtgcc ggcctgggta ctttgatgca tttacctttg    900
aatacggaaa gacttcgtaa actgacggaa aattatgtgg taagcaacgc taagatcaag    960
gccgctttgg gtattgataa attacctgta acggcaaaag aaggattgat gaagaccatt   1020
cgttcatttg aagaaactaa ataa                                         1044
```

```
<210> 855
<211> 1029
<212> DNA
<213> B.fragilis
```

```
<400> 855
tatagagatt tatatagctc atggatagag gctttagcga tttatgtttt ttacgacaaa    60
cctatcagat gtggcaaagt tacacattgt ctttctaatg ggattctatt ttatttgcag    120
tatatttctg tatatttgca ttcggaatcc aaatggatct ttatggctat tttagaacga    180
aaaattatac atgagattga tacctcatgc agtcatatta tctatccgca atttgtgtta    240
```

```
ccccgacaca agcatgcgga atacgaaatt atgctcttca ctcaaggggag tggaaaacag    300
tttgtaggag aaggagtcgc ggacttttcaa gaaggggata ttgctttgat agggagcaat    360
gtgcctcatc tgcatctttg taattcaaaa ctgaatcctg ttgcgaatac tgtatgcagt    420
gccggagaag ccttacagtt tcttccggac atatttcctg tacatgtaga aaatttgcct    480
gattatcaag agatttatcg tctactgaga aaaagtcaat atggcgttcg cttttatgat    540
aaagggttgt atgatgaggt caaagaattg tttcaggaga tggatctctt aaaacatact    600
aatcgtttga tcactatatt acgtatcttg gggagactga ctgaatgtcg gaatattaaa    660
ttactttctg atgtagccta caatggttct aataggcttc tggaagtgaa tgaaccggtc    720
aataaagtgt atacctattt atttaatcat tttaaagaga aagttctcct gcaagaagtg    780
gctgattatg taaagcagaa tccttctgca ctttgccgtt actttaaaca acggacagac    840
aaaagtattt ttcagtgtct ggcagaaatc cggatagaac atgcttgtaa attactgtca    900
tattcaaact tgtctgtttc gcaaatagct tttgagtccg gtttcaacag cgtaccttat    960
tttattaagc agtttcagag tatcactgaa aagactcccg gtgagtatag ggaattgata   1020
ggcagataa                                                           1029
```

```
<210> 856
<211> 1089
<212> DNA
<213> B.fragilis
```

```
<400> 856
aatatttatc atttaaagca tattaacatg aaggtattgt atatcggata cgataagaag     60
ttagttaaaa gtggagctga tcaaattgat attaggaatt tagagctatt gtatgatagt    120
attccatatg taaaagtatt gccggtttta gaaacacgat ctttttataa acgttatttta   180
tttggaattg attctctttt gatccaaaaa gtatttgctg aattacaaac aggtgattat    240
cagttggtat ttgtcagtca gtctttgatg ggtaggattt caaagcatat taaatgtgat    300
ttccccaata ttaaaatcat tacatttttt cataatattg aaaagtatta tgctttagaa    360
cttttgagag tgtcaggctt tactcattat ctttttttatt tggccgcaag ttatttcgaa    420
tttcaatctg tgaaatattc agattatcta atagtcttaa atcagaggga gagtaatttg    480
ttacaaaaga tatataataa aagtgctgac ttgattttac ctacttcatt taaagaccaa    540
tgtagtaaaa tagaaaattg taatataaga aaagaatttg tttacttatt tgtcggtgct    600
gcgttctttg caaatattca aggtataaaa tggtttattt ctaatgtgct ccctgaagta    660
catggaaaat taattatcgt tggtaaaggg atggatttgt atagagaaga attcgctagt    720
gaaagagttg aagtttatgg ctatgtacaa aatttatcag agtattattc tatggcttct    780
gttgttatat ctcctatatt ttctggtggt ggaatgaaaa ctaaagttgc ggaggcattt    840
atgtatggaa aggttgttgt tggtaccaaa gaagcattta ctggatatgt caattgttct    900
ggagttatgt atgaatgtaa tgacaagtat gcatttgtga aaatactaaa tgagttattt    960
gtagataaaa cacatactgt gtttaatagt aaggctcgtg aaatatattt gcaagaatat   1020
agttacgaat cttcatatag taaattttca agatggattt ctcctatttt gaaattattg   1080
aataaatga                                                           1089
```

```
<210> 857
<211> 1401
<212> DNA
<213> B.fragilis
```

```
<400> 857
ataatgaatc aagacacaat ttgcgccata gcaaccgctc aaggaggagc catcggaagc     60
attcgtgttt ccggtcctga agctattacc atcaccggcc gtattttttac cccggccaaa    120
tccggaaagc tgctgagtga acagaaacct tatacgctta ctttcggccg aatttataac    180
ggagaagaaa tgatagatga agttcttgtc agtctcttcc gggctccaca ctcttataca    240
ggggaagaca gcactgaaat cacctgtcac ggatcatctt atattttaca acaagtgatg    300
caactactga ttaagaacgg gtgtcgcatg cgcaaccgg gagaatatac tcaacgagcg    360
tttcttaatg gtaaaatgga tttaagtcag gccgaagccg ttgccgacct gattgcctct    420
tcctctgctg ctacccaccg tcttgccttg agtcaaatgc gaggtggctt tagcaaagaa    480
ttgacaactc tacgtgagaa actgctgaac ttcacttcaa tgattgaact ggagctggac    540
ttcagtgaag aagatgtaga gtttgcggac cgttccgccc tacgccgact ggctgacgag    600
atagaagaag tcattgcacg tctggccaat tcgttcagtg tagggaatgt cataaaaaat    660
ggtgtaccgg tagctattat cggagaaacc aatgcaggaa aatcaactct actgaatgtc    720
```

```
ctgctgaatg aagacaaggc tattgtaagc gatattcacg gcactacacg ggatgtcatc      780
gaggatactg tgaatatagg tggtatcact ttccgtttta tcgatacagc cggtatccgg      840
gagaccagtg atacgataga aagcctgggt atcgaacgga cttttcaaaa actcgatcag      900
gcagagattg tactgtggat gattgattcg gctgacgcaa tttcacagtt aacactgctc      960
tccgataaga ttcttcctcg ttgtgaacac aaacaattga ttttagtctt taataaggta     1020
gaactgataa atgaaactca gaaaaacgaa cttacctcac aattttctga gcatataggt     1080
tcggaaatag aatctatttt tatttctgcg aaacaacgtt tgcacacgga tgaactccaa     1140
cagagactcg tagcagccgc tcatttacca acagtcaccc agaatgatgt cattgtaaca     1200
aacgtccgcc attacgaagc actaacacgt gcgctggatg caattcaccg ggtacaagaa     1260
ggattggacg caaatatctc cggagatttt ctgtcacaag acatacgcga atgtattttc     1320
catttatccg atatagcagg ggaagtgaca aatgatatgg tgctgcaaaa tatatttgcg     1380
cattttgca tcggaaaata a                                                 1401


<210> 858
<211> 648
<212> DNA
<213> B.fragilis


<400> 858
atcagcagac aaatgaataa gagaggcttt gtaagcagga tcttacagaa tttccggaag       60
cctgaaggtt ttttcggaag aatgatactt tggggggatga atacaggaca tgcatcattg      120
gcgcaatggg gaatgtcatg tttgcaatgg caaccggaat ggagtgtact cgatatcggt      180
tgcggtggtg gtgccaattt gctacagata ttgcaacgtt gcccgcaagg gaaagcatat      240
ggcatagata tttcatcgga gagtgtcacc tttgcgcgta aaaaaaataa aaagtatctc      300
ggtacacgct gctttatcga gcagggagga gtccaccgac ttccctatcc tgattatgcg      360
ttcgatgcgg tcactgcttt cgagactgtc tacttctggg gtaacctgca gcatgctttt      420
acggaagtgg cgcgtgtgtt aaagcccggt ggatcgtttc ttatctgttg tgagataagc      480
gatcctgcca ataaggcttg gacgggactt gttgaaggga tggagattca ttcctgtgat      540
gaactgaagg cgattctttc caaaagtggt tttaccgata cggccatatt ccggacgaaa      600
aaagaagaac tgtgcctggt aagccatcgg cagactgtgc ggttgtaa                   648


<210> 859
<211> 1569
<212> DNA
<213> B.fragilis


<400> 859
aaaatgagac aatatgtatt attggcttgt ctctctccgg tagcatgcct gatggctgct       60
accggtcaga agggaggaaa agccaagcaa aaaatcaatg atcggcaact tcctaatgtc      120
gtgtttatct atgccgacga cctcggttat ggcgacttgg agtgttatgg tgcaaagaat      180
gtgcagactc cgaatgtaaa ccgtttggca gctgaaggta ttcgctttaa caatgcgcat      240
gctacggctg ctaccagtac tccttcgcgt tactctatgc ttaccggaga atatgcctgg      300
cgtcgtccgg gcactgatat tgcagcaggc aatgcaggga tgattatccg tcccgaacgc      360
tatacgatgg ctgatatgtt taagaatgcc ggttacgcta cggcggccat cggcaaatgg      420
catttggggt tgggcgataa ggatggagaa caggattgga atgctcctct gccgactgct      480
ttaggagata taggttttga ttattcttat ataatggctg caacagccga tcgtgttccg      540
tgtgtcttta tagaaaatgg taaagtggcc aattatgacc cttctgctcc gattgaagtc      600
agctatcgta agccgatcga gggggaaccg ttgggaaaag atcacccgga attgctgttc      660
aatctgaaat cgagccatgg acacgacatg gccatcgtca atggtatctg ccgtatcgga      720
tatatgaaag ggggcggcaa ggctttgcgg aaagatgaaa atattgccga ttcaatcact      780
tcacatgcca tcggctttat ccgtgagcat aatgacgaac ctttctttat gtatttggct      840
acaaacgatg tacatgttcc ccgtttcccg cacgaccgtt ttcgtggaaa gaacccgatg      900
ggattgcgtg agatgccat cgtgcagttc gactggagtg taggccagat catggaaacc      960
cttgataaac tgggactgtc agaaaatacg ctaattattc tgtccagtga caatggtccg     1020
gttgtcgatg acggctatca ggatcgtgcg gaagaattgc tgaacggtca tagtcccgca     1080
ggaccgttgc gtggtaataa gtacagtgct tttgaagggg gaactcgtat tcctgccatt     1140
gtaagatggc cgaagggagc tgcttcatca caggtttcca acgctttggt ctcgcagatc     1200
gactggtttg cctctttggc ttcattggta ggagccgggc tgccgaaggg agcggcaccc     1260
gatagcttta actacctcga tacttggttg ggcaaaaacc agtccgaccg atcctgggtg     1320
```

```
atagagcagg cttccaatca tacattatca gtccgcacca aggactggaa gtacattgaa    1380
cccaatgacg gaccggccat gattacctgg ggaccgaaga tagaaaccgg aaatctgagt    1440
acaccgcagt tatatcacgt ggtagacgat gtggcagaac agaagaatgt agcttctctc    1500
catccggatc tggttttttga actccagaat atattaagac atgtccggat gaaaaacctg    1560
aagccctaa                                                           1569
```

<210> 860
<211> 252
<212> DNA
<213> B.fragilis

<400> 860
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gttcctgagc aacaaaaagt tgcccaggat tttgccatgt cagaattttc acttatctta    60
gtgttgcaaa aagaaaacaa gcaaaactct aatatgacat ggcaaaaata caaattaaat    120
ctgagaaact cacacctttt ggaggaattt tttcaatcat ggagaaattt gactccatgc    180
tttcacccgt tatcgactca acactgggtc agagatgcag cagtatcttc ggatatcagt    240
tcagcgagat ag                                                        252
```

<210> 861
<211> 375
<212> DNA
<213> B.fragilis

<400> 861
```
gcctccatta atgatgttca tcattggtac aggcaataca tacgtattcg tacctccgat    60
gtatctgtaa agaggaatat cgagatagtt ggcagcagct ttagctacgg caagcgaaac    120
acccagaata gcgttggcac ccaatttggc ttttgtcttt gttccatcca atgccaacat    180
ggcatgatca atgcctattt ggtcgagggc cgacataccg atcagatgcg gagcaatgac    240
tttattgacg ttctctactg ctttctgtac acccttgccg ccataacgat gtttatcacc    300
gtcgcggagt tcaagcgctt cgtgttcacc ggtcgatgca cccgatggaa cggatgcacg    360
tcccataatg cctga                                                     375
```

<210> 862
<211> 552
<212> DNA
<213> B.fragilis

<400> 862
```
cgaacgatta atgaaacctg tacgatgaaa aaattaataa aactggtact cttcctgatg    60
gtagcctatc cactaacggg tgctatcctt tcggcttgct cggaagagag tgattgctcc    120
atgaccggac gcccgatggt ctacgccaaa atgtatatca tcaatccgga aaccaaggct    180
gtactgaatg acaccctcga ttcattgagt gtgacagcat tcggaactga ttcaataatc    240
atcaataacc agaaaaaggt acatgatatc gctctcccac tacgctatac aagtgactcg    300
actattcttg tgtttcatta cacccggttg ttaagagaca caatggtgat cctgcaaacc    360
aatactcctt actttcagtc gatggattgc ggatacagta tgaaacaaaa tatcatcagt    420
attcatccga ttgattatac ggaaaccaat aaaaagaaat atcatagcat agactctcta    480
tatatcaaat caaatgcagc taacattaat ggaacagaaa atctcaaaat attctaccgc    540
tacaatcgtt ag                                                        552
```

<210> 863
<211> 246
<212> DNA
<213> B.fragilis

<400> 863
```
gctacagata aaaaaataga caacattgct atcaatccaa aatcagctgg agaaactaat    60
ctagctataa caatggtcaa tataaagcgt aatgcttgcc ccgacatttt ctcaacagca    120
ttccacatta aactatttaa tgctgccaat tttaaatttt taatcatcat atacaatcat    180
catctccaag ttattaacaa tataaaagca ttgatcattc aaaaatacaa tcaatatta    240
```

gtatag   246

<210> 864
<211> 966
<212> DNA
<213> B.fragilis

<400> 864
tttataagta aaatggatat atctgttgtc gtaccattgt tcaatgaaga agaatccatt   60
ccggagcttt ttgcctggat tgaaagagtg atgaaggcca acggcttttc atacgaagtt   120
atctttgtaa atgatggtag taccgaccgt tcttgggaaa ttatcgaaga gcttcagaaa   180
cagtcgtcca ctgtgaaagg gatcaaattc cgacgaaact acggaaaatc cccggctctg   240
tactgtggct ttgaacgtgc cgaaggaaat gtggtgatca cgatggatgc cgacctacag   300
gatagtcccg atgaaatacc ggaattatac cgtatgatta ctgaagacgg atatgacctt   360
gtttcaggct ataaacagaa aagatacgac ccgctgtcga aaactctacc taccaaacta   420
tttaatgcca cggcacgtaa agtttcaggg attcataatc tgcacgactt taattgcgga   480
ttgaaagctt atcgcaaagc tgttgtaaaa aacatcgaag tatacggaga gatgcatcgc   540
tacatcccgt atctggctaa gaatgccgga ttccagaaaa taggcgaaaa ggtggtgcac   600
catcaagcac gtaaattcgg aaaaactaaa tttggaggat ggaatcgctt ctttaacgga   660
tatctcgatt taatctctct ttggttcctc tcaaagtttg gaattaaacc aatgcacttt   720
ttcggtttat taggctcatt gatgtttata ctgggattca tttcagtggt tattgtcgga   780
gccagtaaat tatatagtat gaatcacggt atgccttatc ggctggtaac agattctccc   840
tatttctatc tgtcgttgac tgccatgatt attggaacac aactcttttt ggcaggattt   900
cttggcgaac tgatttcacg caacgccccg gaacgcaata attatcagat agaaaaaata   960
atataa   966

<210> 865
<211> 798
<212> DNA
<213> B.fragilis

<400> 865
agtgattgca aaaccatatc ctctggagaa gctgaaagaa acgatcgaaa cttatttata   60
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aataatgcta taaagataaa ttggattatg aagaaagtag tactaatcgg ggccagcggc   180
ttcgtcggtt cggctattct gaatgaagct ttgaaccgtg gattccatgt gacggcggta   240
gttcgtcatc ctgaaaagat caagatagag aatgaaaatc tggaagtgaa gagagctgat   300
gtttcttcat tggatgaagt atgtaaggtt tgtaaaggtg ctgatgccgt gatcagtgct   360
ttcaacccgg ggtggaataa tcccgatata tacaaggaaa ccattgaggt ttatctgacg   420
attatcgatg gtgtaaaaaa ggctggagtt aatcgttttt tgatggtggg tggtgccggt   480
tcactgttta ttgctcccgg catccgactg gtcgattcgg gagaagttcc cgaaaagata   540
ttgcctggtg tgagagcctt gagtgatttt tatcttgatt ttctgaagaa agaaaaagag   600
gttgactggg ttttcttctc gccggcggca gatatggctc ctggagtacg tacaggcaga   660
tatcgcctgg ggaaagatga gatgattgtg gatatggtag gtaacagtca tatatctgtg   720
gaagattatg cggctgccat gattgatgag cttgagaagc cggagcatca tcaggagcgt   780
ttcaccatag ggtactga   798

<210> 866
<211> 876
<212> DNA
<213> B.fragilis

<400> 866
agtgacggca aaattcaata tcggactttc aatgacaaca acctcaagaa cggcaaggtc   60
tatgatgtcg attttgaagc cgcacagcaa acgcaggcac caaccggaac gctcgtagcc   120
cgctaccggc cgatcccttc gttgagtgat ccaaaatact attcacactt caccctctca   180
aagttccgca atggaacctt ccaactcctc aactacgacg aaggtgacgt agatatgggt   240
ggaggagcca cctggtcgaa cttgctgaag aatggtgcac gcctggacac aggatactat   300
atgatggtaa ccggtactcg catggcaagc ggagctgtat tggctaatgt gactttcttc   360

```
accattgaag agggaaagac aacaactgtc gatctggtca tgcgcgaaag caaagaccag    420
gtacaagtaa ttggtaattt taattccgaa tcgacttatc tgcctatagg aacctccgaa    480
ccgcaaagta ttcttcagac ttgtggccgg ggatactacg ttgtagcagt gctgggagcc    540
ggacaagaac ccactaacca tgcccttcgg gatattgcag cttttaagcgg tgaatttgaa    600
aaatggggac gcaaaatggt gttgctcttc cctagtgaag aacagtacaa aaagttccgc    660
ccgtcagaat tccccggatt gccttcaacc attacctatg gtatcgacgt agatggagcg    720
atccagaaac aaattgccga atcgatgaag ttgccaaaca gcaccatcct gcccatgttt    780
attatcggtg atacattcaa ccgggtagtc ttcgtgtcac aaggttatac catcggattg    840
ggcgaacagt taatgaaagt aatccatgga ttatag                              876
```

<210> 867
<211> 717
<212> DNA
<213> B.fragilis

<400> 867
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ataaagttaa attatagtgt tgcggaatta aggataacaa acgaatcata tatgaagcca     60
acaatcaaaa aagtacaacc cgtcaaagtc gtagctccgt tccttaacag tcagtccgaa    120
agtccggtcc cactggatgc acttaccgac caagagaaag tttccgattt gtacttcctt    180
aagggaaccg tacatcaaat agctaaacct tacctaagta ttaataattg cactttcaaa    240
caacaaatat tcagcgaatg tcagtttaaa tcagctcaac tgacagacgt acgttttgaa    300
aattgcgatt tatccaacgt ttcgtttgcc ggaactactt tctaccgggt agaatttata    360
tcttgcaaat tgctgggaac cggtttcccg gaagccaccc tcaatcatgt tttaatggat    420
cattgctacg gacaatacat caatctctcc atggtaaaaa tgcgaacagc ccgtttcagc    480
cattgcaatt tccgaaacgg cagcctgaat gacagcaaac tgatgccggc agcttttgat    540
acttgcgaat tgttagaagc cgacttttcg cacacttcac tcaaaggtat cgacctgaga    600
aactctagaa tagcaggtat tcaactcaat atagccgatc tgaaaggagc catagtcagt    660
tcgttacaag caatagatct gttacctcta ctaggggtca aaatagaaga cgattga       717
```

<210> 868
<211> 462
<212> DNA
<213> B.fragilis

<400> 868
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aaagagctaa aagatatgaa acttagtcag caatcacaag ccattatcga atctgcgatt     60
caaaaagcaa tcaacaaata tacctgtgga tgcgaacaga ccatcgtcac agatatccat    120
attcaaccga atcagaattc cggtgaactc tttatctatg acgatgaaga tgaagaacta    180
tccagtgtaa ccatcgatga atggacaacc tacgaagggg acgactttta cgaagatgct    240
gaaagaattt tccgtaccgt gctttgccgc atgaaagaga acgggagctt cgataagtta    300
accatcctca aaccctactc ctttgtgttg gtagatgaag acaaagagac gatctcagag    360
cttctgcttg tagatgacga cacactgttg gtgaacgatg aactattgaa gggactggac    420
aaagaattgg acgacttcct gaaagacctg ttggagaaat aa                       462
```

<210> 869
<211> 1236
<212> DNA
<213> B.fragilis

<400> 869
```
aaaacaataa atcttgatag tatggaaagt atagactttg gaaccctgtt tcagggattt     60
ggaacaatga tagccagcgg atggtttctg gccagtgccc gtatgttttt aatagctttg    120
gggtttctgc tcatttattt aggctggaaa ggggtactcg agccaatggt gatgattccg    180
atgggcctgg gaatggtagc tattaattgt ggaacactga ttatgcccga cggaacattg    240
gggaatcttt ttttagatcc gatgctgtcg gataccgacg cattgatgaa cacgatgcag    300
attgactttc tacaaccggt atacacattg acctttagta acggattgat agcctgcttt    360
gtatttatgg gaatcggtac attgcttgat gtgggattcc tattgcagaa accgtttgcc    420
agcatttttc ttgctttatg tgctgaattg ggtacattct tgacagtgcc tattgcttcc    480
ggtctgggac tgtctttaaa agaaagtgct tcagtggcaa tggtaggcgg agctgatggt    540
```

```
ccgatggttt tgttcacatc gcttgctttg gccaaacact tgtttgtacc tattacggtg      600
gtggcttatc tttatctggg attgacttac gggggatatc cttatttggt gaaattgctg      660
attcctaaac gtctgcgtgc tatcaagatg gtagaaaaga aagctcctaa aaattatgat      720
gcgaaagtga agctggcttt ttctgcaatc ctgtgtgcag tattgtgttt cttgtttccg      780
gttgcttcac cattgttctt ttcgctattc ctgggagtgg cagtacgtga atccggtatg      840
aagcatatat atgattttgt gagcggtccg ttgctctatg gttctacttt tatgttagga      900
ttattattgg gtgtactttg cgacgcacat ttgttactcg atccgaagat tcttaaactg      960
ttagtattag gtatgcttgc tttgttactg tcgggtatcg gaggcatcat gggagggtac     1020
attatgtatt tcattaagaa agggaactat aatccggtga tcggcattgc agccgtaagc     1080
tgtgtaccca ctacggcaaa agtggctcaa aagttggtaa gtaaagataa tccgaattct     1140
tttattttgg gtgatgcatt aggagccaac atttcaggag taatcacttc ggccatcatt     1200
acaggcattt atataacgat tataccttat ttataa                              1236
```

```
<210> 870
<211> 1533
<212> DNA
<213> B.fragilis
```

```
<400> 870
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ttctttagct tttttatcct gatgttctgc ttttccggta ttgtactcaa tcatcgtaca      120
ctcttttcaa aagctgaagt cagcagaaac tggatgccgg aaagctatca ctacaaaaat      180
tggaataatg gaatcataaa gggaacacta cgcctacccg atgggaaat tctggcatat       240
ggtaatgcag gagtctggaa aacagactcc tgctttgcta catttgccga tttcaaccga      300
ggtctggcca aaggaatcga caatcgtaaa ataagtaata tcgtccgtgt agccaataac      360
gatatctggt gtgccggatt atattctatc tatctcctgg accatgacag ttggaaagaa      420
tatccgatag ccggcaatga cgaacgaatc tcagatatca ctcaacgtgg ggatacctta      480
gtcatattga cacgctctta tctttatacg ggtgtttctc cttatgacga attccggaaa      540
acagaattga aaacaccgga aaactattcc ccaaagacct ctttgttccg gaccatctgg      600
ctgctgcata gcggagagtt attcggtacc cccggcaaac tggcagtcga ttttctggga      660
gtagtattaa tcgttctcag tgctacagga atcatataca cccttcttcc cccattcatt      720
cgccggagac acagaaaaag acttcctgtc aagacacagg caaaggctct gaaaacttca      780
ctgaactggc acaataaaat gggtacatgg ttgatcggac tgaccctatt gctatctgtc      840
acaggcatgt gtctgcgacc tccattaatg atacctttg ttctggtcaa tacccggcct      900
gtccccggga gtacactcga ttcggataat ccctggcacg acaagcttcg cagtattcgt      960
tgggacgcat cccggaatgt ctggctgtta tcttcgtcaa tgggattcta ccggataaac     1020
gatttacaac ttccaccggt taagttaaaa caaactccac cggtaagccc tatgggagta     1080
aatgtatttc atccccaaag tccggacgaa tggctgatcg gatctttcag tggcctcttc     1140
gtctggaatc cttccaccgg caccgtcctc gattattata cgggacaacc tcctgcagcc     1200
gttcacggac gaccactcgg cggcagtctc gtcaacggat tcactgacga tttagttacc     1260
cgtgaagtaa tcttcgaata cgacaacgga gcacgcaata aagagaacaa tttagtatta     1320
ccggcaatgc cggaccttat aaaacagcaa cccatgtcgt tatggaattt ctgtttggaa     1380
cttcatgtcg gtcgttgtta ttccccattc ttaggtgttt tttcagatct attcgttttt     1440
atttccggcc ttctgctaac gttaatcctt atttcgggat atatcgtata taaaagacac     1500
cataaacgaa gcaaaaaaat aaggatgcat taa                                   1533
```

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<210> 871
<211> 1929
<212> DNA
<213> B.fragilis
```

```
<220>
<221> unsure
<222> (1889)
<223> Identity of nucleotide sequences at the above locations are unknown.
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<400> 871
agataccgaa agattaaagt agaaaacagt aattccggaa agatgaaaca aaaagagaaa       60
gaaatcaaaa ctaaatatat gaaccaaaag cattcactcc cccctctcct taagagagga      120
```

```
acgggggtga ggccttactt aacaacaaat tgtatgaaaa ccctaacccg ctttctaatc    180
attccgatgt tgtcggttgc gttctttca tgcagtgagt cccatttcct gaaagatgtg    240
gcttaccgaa accaagtgac gcaagatttt gaaatgaaga agcagcaact tcccaatgga    300
gagttgtttg cagtgtttaa tgaaaagctc accattcccg aacaagaggc tttaatgttc    360
ctctatgcct acatgcctac aggtgacgta acagattata caggcgacta ctatctggaa    420
aatgtcagac tctccgatca ggcacgtcgg gaaatgcctt ggggaaaaga aatccccgat    480
gacgtattcc gtcattttgt gctccccatt cgggtaaaca atgaaaacct ggatgactca    540
cgccgggtgt tttacaatga actgaaagac cgtgtgaaga atctgtcatt acacgacgct    600
gtactcgagg taaaccactg gtgccatgaa aaggtaatct acaccccaag tgatgcccgt    660
acgagttctc cactcgcttc cgtaaaaacc gcttatggtc gctgtggtga agaatccacc    720
ttcaccgtag cagctcttcg ctcggtaggt attccggcac gacaggtata tactccgcgt    780
tgggcacata ccgatgacaa ccatgcatgg gtagaagcct gggtagatgg caaatggtat    840
ttctttggtg cctgcgaacc ggaaccggtt ttgaacctgg gttggtttaa tgctcccgcc    900
agtcgtggta tgctgatgca tacaaaggta ttcggacgct ataccggaca agaagaaatc    960
atgtacgaaa ctccgaatta tacagagatc aacgtgattg acaattatgc tccgactgcc   1020
aaaggttccg tactcgtgac agatgccgaa ggtcagccgg tagccgatgc taccgtagag   1080
ttcaaggtct ataactacgc tgaatttat acggtggcca ccaaacatac agaccggagc   1140
gggcatgcat cattgactgc cggcaagggt gatatgttgg tatgggcctc caaagacgga   1200
cggttcggtt attctaaact atcattcggc aaagacaatg aactgaagat cacactggac   1260
aaaaacgccg gtgaaaccta ttcgcttcca ctggatatcg ttcctcctgc cgaaggcgcc   1320
aacctgcccg aagtgactcc ggaacaacgt actgaaaatg atcggcgcat ggcacaggaa   1380
gattctatcc gcaacgcata cgtagccact ttcattaccg aagagcaagc tcggactttt   1440
gccaaagaga ataagctgga tgaaaccgaa acagtacgct tactgatagc ttccagaggt   1500
aaccaccaga ctttaaccga tttccttct gatgctgtaa aagccgataa ggccggtcag   1560
gctatcagcc tgctgaaagt agtctcggcc aaagacctga gagacgtaag cccggaagta   1620
ttgaacgacc atctgaataa ctccggcctg cccgcttctg aagatttctg tagcaacgta   1680
ctgaacccgc gtgtagccaa tgaaatgatc actccttaca aagcattctt ccggaaagag   1740
attccggcaa gtgaagcaga agccttccgc aaaaatccac aagctttggt agaatggtgt   1800
aaaaaagaga tcacaatcat taacgaatta aactcacaac gtataccaat gtcaccattg   1860
ggtgtatgga aaagcccggg tagcaaacna aaaaatcccg taccatttct ttgtatccat   1920
ggcccgtag                                                           1929
```

<210> 872
<211> 1296
<212> DNA
<213> B.fragilis

<400> 872
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agatgccgaa aaggcaaaaa cagattctgt aaactaacta tgagcatcat tatttacctg     60
ttgattacga tggcattttc tgctttcttt tcgggaatgg agattgcttt tgtttcggta    120
gacaaacttc gttttgaaat ggaccggaaa ggaggggtat catcacgtat cctttcgcta    180
ttcttccgga atcccaatga tttttatttcg accatgctgg tcgggaataa catcgctctg    240
gttatctatg gtatattgat ggcacagatt atcggcgaca atttgctggc cggatggatc    300
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acaggagagt ttctgcccaa gacgcttttt aagatcaatc ccaatctggc cctgaatgtc    420
tgtgcagttc ttcttttcat ctgttatgtt gttctctatc ctatatctaa attttcgtcg    480
ggagtctctt acctcttct tcgcctgttt gggatgaaag tgaacaagga agcctctgcg    540
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gtcaagatac gcgactgtat cgttccacgg acagaagtgg tagctgttgc gctggataca    720
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aaagattggc gcgatcatgt gaaagaagtt cccattgtgc ctgaaacgat ggcggcccat    900
aaactgatga agctgtttat gcaacagaaa aagaccattg ccgtggtagt ggatgaattt    960
ggaggaactt cgggtattgt cagccttgaa gaccttgttg aagaaatttt cggtgacatc   1020
gaagacgaac acgacaacac ttcctatatt tgtaagcaga tcggtgagca tgaatacgtg   1080
ctttcagccc gtttggaaat agaaaaagta aacgaaactt ttaatctgga gcttcccgaa   1140
tccgatgact atctaacggt gggaggatta atcttgaatc aataccagag ctttccgaaa   1200
ttgcacgaat tggtctctgt cggtaaatat cagtttaaga taattaaggt tacagcaacg   1260
```

```
aaaatcgaac ttgtccgact gaaagtaatg gaataa                              1296
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```
<210> 873
<211> 1500
<212> DNA
<213> B.fragilis

<400> 873
aagaagagaa aaaaggttta tttccaatta atttgtattt ttgaacttct gaataataac      60
ccaagaccat ttatgaagaa aaaaaatatc ctattctttc tattatgctt tctcctgaca     120
agcctatcgg cacaaacttt ggaacaagca agaggcatgt atggcagagg caatacgct      180
gaagccaaac ctgttttca aaaatatgtc aaatcgcaac cggcaaacgg taattacaac      240
ctatggtacg gtgtgtgttg cctcaaaaca ggtaatgctg ccgaggccct aaaatacctg     300
gagacggcag taaagaaacg cattccgagc ggacaactat atctggctca gacttataat     360
gatttatacc gctttcaaga tgcagtagat tgctacgaag aatacattgc agacttgtct     420
aaacgcaaaa aaccgacaga agaagccgag cagcttttag aaaaggctaa aggaaacctt     480
cgcatgctga aaggggtgga agacgtatgt gttattgaca gtttttgtaat agacaaagcc     540
aatttcctca aagcttataa aatcagtgaa gaatccggaa agctcttcac ttacaatgac     600
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cgccagcaaa ccgataaact gaagagccag cgtgaaggat tcgcacggtc taataaagac    1380
gaacaaagta aaatggcacc ggctatccgc gatcttgaga gagggtact tcagatgtca    1440
gaagaactgg ataaacaggc tattgaagtc cggaatgcag aaaaacaaaa cttaaaataa    1500

<210> 874
<211> 552
<212> DNA
<213> B.fragilis

<400> 874
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caggaggtag ataccttct tcctgtacaa aaccgtgtca tagagcgtga aggaaaacgc      180
attgagcgtg agcgcctttt gttgccccgt atggttttcg ttcatatctc ccgtcaggaa     240
atggctgccg tccgaagtac actgaatgta tacgatttcc ttcgagatcg ttctaccggg     300
gctcctacct gtatccctga tgcgcaaatg gctgatttc gctatatgct cgattactcc      360
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aagggcgatt tacaaggctt gcggggagaa ttggtccgct acaataataa atatcatatt     480
ttagtacgta tcgatatgtt cggtagcgct atggttacaa ttccggctag ctacgtccgg     540
aaagagaaat aa                                                         552

<210> 875
<211> 1497
<212> DNA
<213> B.fragilis

<400> 875
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agcgccatta cctccgtttg cgaaggaaga gggattcttc tggtagatga cgaaaaccga     120
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```
gaaaatgaag gagacctgat cttctctgcc caaagtatga cagaaacaga catggccata   180
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tcgatcgaag cagcagaggg agtgaccacc ggagtatcag cagccgaccg catacagact   360
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gcattccgtc accactatat gcactacaga tatatcaact gtgaagtcgg tcccgaaaat   780
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cctaacaagg tggaaatcat ccgatacttg gacgaattag gagaatcggc aaaaatcatc   900
ggtgcagtga atacagttgt cattggagac gatcagaggg ctaccggaga aaacacagat   960
ggaaaaggtt ttgtaaaagc catttcggaa attatcacca tccaagacaa gaagattgcc   1020
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aaagagatca ctatcttgaa cagaaacaga gacaaaggcc aggcattggc agatttactg   1140
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acagatatcg acattgtcat caatgccacc tcagtagggc tttatcccaa cgtagaccaa   1260
cgcttggaca tagacacaga taccttattg ccacatatgg tagtagccga ctgcatcccc   1320
aacccggtat acacccaact gttgagagat gcggtccgcc gcggttgttg tcatgtattg   1380
cccggaatga aaatgctggt ctatcaagcg gtcattgcca taaaatactg gtcaggagtt   1440
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<210> 876
<211> 327
<212> DNA
<213> B.fragilis


<400> 876
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gcttgtgatt tagagcgcta tccactgaca gacttgtccg aagagacttt ttggaatagc   120
gaatcgaatg cggaattggc attgacttct ctgtatagag gaagcctgac agacggcgta   180
gagtataacc cttcggattg gtggtcctat cacggaatga ttatgatgga gcatctttcg   240
gataacgctt ttgaccgtcg gggagagaac aatcctttct ttaagatttc gagtggaaac   300
cctgactgca gacaatgctt ttattaa                                       327
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<210> 877
<211> 921
<212> DNA
<213> B.fragilis


<400> 877
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tggttggcag acaaagtaat attggtaggt gatcccggac gggtggcact cgtagcttct   180
cacttcgaaa ataaagaatg tgaagtggaa agccgcgaat ttaaaacggt taccggaact   240
tacaaaggca aacggataac tgtcgtttct accggtatcg gttgtgacaa tatcgatatc   300
gtggtcaatg aactggatgc tttggcaaat atcgacttcc agactcggga agaaaaagag   360
catctccgct ctttagagtt agttcgcatc ggtacatgcg gaggattgca acccaacaca   420
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atagaccgta ttgcgcaaga agatatggtg cgcggtgtta ctattgcagc cggtggtttc   660
ttcggaccgc aaggacgcga actccgtgtt cccttggcgg accctaagca gaatgataaa   720
atcgaaaagt ttgaatataa aggttacaaa ataaccaact tcgaaatgga gagttccgcc   780
cttgccggcc tcagcaagct gatgggacac aaagccatga ccgtttgtat ggttatagct   840
aaccgcttga tcaaagaagc gaacacaggc tataagaata ccatcgatac attaattaaa   900
actgttctcg atcgaatctg a                                             921
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<210> 878
<211> 1161
<212> DNA
<213> B.fragilis

<400> 878
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gacaaaaaga agatgaatat agttttttgta ggactttctg gagttccata tgcgcgtaga      60
gctattgaca caagattact ctcatttgca aacttgttta cttcatcgaa tcacgatgtt     120
gtaatattaa atcgttattc ggcattgaaa cctaattggg aatatgatgc tcaatttatt     180
gatgatagag ttagtgtaat agaactttgt aatttgaagg gaatacccaa atgtatgtca     240
aagttcttat taatttatac aataataatt gaattctgga aacttatatt cttgaataag     300
aaaaagaaaa tagatgttct ccatgtggct tcaggacatt ttatagatat tttctattat     360
gttataattg cacgttgtat aggtgctaag gttgtttatc attattgtga atatagatct     420
tccttttaaat caagaaatgt ataccatcgg attaatggta aattgatcaa ttgctatgct     480
ccgaagtttt gggacggtgc tatttgtatt agtcattttt tggtatctaa gacaaaagaa     540
gttaataaat ttattaaaat aattcaaatc cctcccatct gtgattatga ttattttgat     600
catattattt gtgaaaaaga agcctctcct tatttgcttt tttgtggcta tacaagctat     660
tctgagataa tttatatgat aatagacgct tataataaat ctaggattaa agaagtggct     720
tcattaaaga tggtaataaa tggtaatcct gtagtgattt ctgagattag gagatattgt     780
cctaaaatgg agattcttca aaatttaaaa tatacagatt tgatttctat gtttaagggt     840
gctttagctc tatttatacc actgagaaat accattcaag atattgcccg atttcctaat     900
aaaatatgtg aatatacagc gtgtcatggc gtagtggtga caactcggta tggggaaata     960
ccttattact ttgaggataa aataaatgca ttgattgcag atgattttaa cgtggcatca    1020
atagccgaac agttagactg gctatatgac aatatggatc agacagcacg aattaaaaag    1080
aactcttatt tattggggcg tagagttttc aatttaattt cttataaaga ttctgtgaca    1140
gaatttttaa aagagttgta g                                             1161
```

<210> 879
<211> 210
<212> DNA
<213> B.fragilis

<400> 879
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atgacgaagg taagccccat catggcaaaa gtggataaca ataagctaaa cataacacag     120
tatgatttta gattgaaaaa taaaatgcaa tgtataccga ccgccggaaa atacaagacg     180
cacctccccg gcatttatcg gaatggataa                                      210
```

<210> 880
<211> 903
<212> DNA
<213> B.fragilis

<400> 880
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atcatgatag aacaaccttc cccaaaagta tatgatgaac ttctttccat ctgggaagaa      60
gctgtccgaa gcacacacca tttcctgacc gaagcagaca tacaatttta taagccgctg     120
atccgacatg aatatcttgc cgcagtccga ttgtacatca ttcgcgaaga ttcaggaact     180
attgcagcct tcatgggatt aagtaatgat tgcatagaaa tgttgtttgt ccgtccgaat     240
gcccatggac atggctacgg tagtcggctg gttgaatttg ccattcggaa aaaacgaatc     300
tataaagtag acgtaaacga acaaaatgca gcagcactgg gattctattt acatatggga     360
tttgagacta ccggtcgcga tgcattggat gcaacaggta agtcattccc catttttacac     420
ctgcaaattc ctcccatccg actccgaaaa gcaactcttg aggatataga tctgcttaga     480
accctatttta cacaaagcgt gcagaatacc tgttcggctg actataacag gttacaaatc     540
caagcatgga ccggacgggg aactctacaa cgttggcatg aactgtttca aagcgaccta     600
tactttctgt tggcagaaga cagcagaaag tctcaagtgg caggattcac atctgtcaac     660
tctaaaggat atctgcatag catgttcgta catcccgact atcaacgcca gggaatagct     720
tcgcgcctat tgctaaaagc agaagagtat gtccgtatcc ggcaaggcgt atctgtctat     780
tcggaagtga gcatcactgc ccgcccattt tttgagaaac acggctatag tatcgaaaaa     840
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```
gaacaaacag tatctgttgg tgacatagaa atgactaatt tcttgatgta taaacgaatt       900
taa                                                                      903
```

<210> 881
<211> 192
<212> DNA
<213> B.fragilis

<400> 881
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gaatggtcag agtgtgaacg gagttttatg cgtttgttta accgtatcca agcaagtata        60
catgatatct attgggaaaa tcagtgtaca gaccatctca tgacagatga attgcgaaga       120
gaggaggggg aacctttact gctatctgtg gcagatgtta tggaaatttt agttcggaaa       180
attttgaaat aa                                                           192
```

<210> 882
<211> 1305
<212> DNA
<213> B.fragilis

<400> 882
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aaaacaagag aaacaatgaa aatagaaaaa attacaggac gagaaattct cgactcaaga        60
ggtaacccta cagtagaagt agacgtagta ttggaatcag gcattatggg acgtgcatcc       120
gttccatcgg gtgcatcgac cggtgaacac gaagcgcttg aactccgcga cggtgataaa       180
catcgttatg gcggcaaggg tgtacagaaa gcagtagaga acgtcaataa agtcattgct       240
ccgcatctga tcggtatgtc ggccctcgac caaataggca ttgatcatgc catgttggca       300
ttggatggaa caaagacaaa agccaaattg ggtgccaacg ctattctggg tgtttcgctt       360
gccgtagcta aagctgctgc caactatctc gatattcctc tttacagata catcggaggt       420
acgaatacgt atgtattgcc tgtaccaatg atgaacatca ttaatggagg ctcacacagt       480
gatgctccga tagccttcca ggagtttatg atccgtccgg taggtgcaag ttcttttaaa       540
gaagggttgc gcatgggtgc cgaagtattc catgctttga aaaagtatt gaaagaccgt        600
ggtctgagta cagctgttgg tgatgaaggc ggttttgctc ccaacctgga aggaacagaa       660
gatgcactta actctattct tgccgctatc aaagctgcag gctacgaacc gggcaaagat       720
gtaatgattg gcatggactg cgcctcttcc gaattctatc atgacggtat ttacgattac       780
accaaatttg aaggtgaaaa aggcaaaaaa cgtacagctg acgaacaaat tgactatttg       840
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atggcacacc gccatggata tacgacggtc acttcacacc gctcaggcga aacagaagat      1140
gcaaccattg cagatattgc cgtagcaacc aacagcggac aaatcaagac cggttctcta      1200
agtcgttcgg accgtatggc aaaatacaat cagctgcttc gtattgaaga agagttggga      1260
gaccgcgctg tatacggata taaacgaatt gtagtaaaag gctaa                      1305
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<210> 883
<211> 543
<212> DNA
<213> B.fragilis

<400> 883
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ccggttatgg ataccattca gataaaagat aaactattca ctgtttctat cagggaacaa        60
gagattcaga aagaagtgat tcgcgtggcg aacgaaatta atcgtgattt ggcaggtaag       120
aacccgttgt tcctcagtgt gttgaatggc tcgtttatgt ttactgccga cttgctgaaa       180
cacattacga tcccttgcga gatctctttt gtgaagctgg cttcttatca gggagtatca       240
tctaccggtt ccattaagga agtgatcggt attaatgaag acatagcggg acgtacgatc       300
gttattgtag aagatattgt ggatacggga ctgactatgc agcgtctgct ggaaacattg       360
ggaacacgcg gaccaaaaga aattcatatt gcttcgttgc tggtgaaacc ggataaactg       420
aaggtggact tgaatattga atatgtggca atgaatattc ccaatgattt cattgtagga       480
tatggtctcg attatgatgg tttcggccgt aactatccgg atatttatac agttgtagac       540
taa                                                                     543
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<210> 884
<211> 477
<212> DNA
<213> B.fragilis

<400> 884
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atctatgcaa actattatgc ttttgctaac ctgggaacag gtgcagggtt tataacactt   180
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gataaattgg cattgaagaa agacataaca tccaaaatag accgaagcgc tgccgaaaaa   300
gtaaaagttg gcgatacagg tatcacgatt acccgactgg ctcaaattgg caatgctgaa   360
atcaatggca atatcataga ggtcaagtca atggacggat tactgaatga aaaaactccg   420
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<210> 885
<211> 528
<212> DNA
<213> B.fragilis

<400> 885
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gtaaagacta tctctattgc cgactttcct attaagtcgg actatgttta tgcaccgtta   180
ggcactaagt tcaacgagga cctgaaagac attttccttc gtcagacccg tctgaaactg   240
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cgttttgtga acaatacgaa tcatgaacag gacttcgagc aacagttctc ggctttccgt   420
gtttatgatt cgagggagtt gctaacagcc gttcaggacg gactgattgc ggagatgact   480
aaagagatta cagatcaaat atttaacgca acggtagcaa actggtaa   528

<210> 886
<211> 1068
<212> DNA
<213> B.fragilis

<400> 886
aataaaccgg aaatgaaaaa gctaattata ctgacagggc tgttactctc tacctcggct   60
tatgcccaga ccgaagttac agcgggagtt acccggggaa aagattacgg tgtaacctat   120
gcacttccta aaacagcaat caatattgaa gtcaaagtca taaagtgac atatactccg   180
ggagaattca gcaagtatgc cgaccgttat ctccggttga ccgatgtgtc gggtgagcct   240
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gaaagtaaaa atgccctggt acgcggacag gcagacaaca tgcccaaaga tggggagcaa   600
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gacaacgaag tagctttccg cttttcgaag aagctgggca tagttgccaa taacgatctt   780
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ctaacggagg ggaaaaagca atggtttaac ggagaacttc ctgtcacaca attcggtacc   960
atcgaatatc tggctccggc gcttttcaat aagaaatcga ctgttcaggt tactttcaac   1020
ccggatacag gaggcttgat caaggtagat agagaagaag gagaataa   1068

<210> 887
<211> 3054

<212> DNA
<213> B.fragilis

<400> 887
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gtagagaccc ggaagaaaga cggacagacc agctttgaaa agtttacagg attccgcaac   180
caccctatcg tacctcaact cacagatgag atcgttctga aacacatccg ggatatccag   240
cgtgcccaac aaatcaaacc gtcggaagcg ctggaaggga aatacaatct caccatcgaa   300
atggagacgg gtgtaggtaa aacgtatacc tacatcaaaa ccatctttga actgaacaaa   360
cgctacggtt ggtgcaagtt catcattgtc gtacccagtg ttgccatccg cgaaggagtc   420
cacaaaagcc tggagattat gaaggaacac tttgcctcgg attacagcac ccctctgtct   480
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aagatcgaat gtgccaaaaa acatttttgcg aagacaaacg gtgggaagct taaatataat 3000
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<210> 888
<211> 1251
<212> DNA

<213> B.fragilis

<400> 888

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gcacctaccg atttgtccgt gctaataacc ggagagagtg gtgttggtaa ggaaagtttc     180
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caagataccg aagagtatgt ggaagagtcg ctttcgttgg acgaagtcga gaaagaaatg    1140
atacgtaaag cccttgaaaa gcatcatggc aagcgaaaaa gcgcggcaaa ggatcttaat    1200
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<210> 889
<211> 1410
<212> DNA
<213> B.fragilis

<400> 889

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acacttcgtt ggagtgtgct cgctctggtc gcgtttacta tgctttgcgg ctatttcctc     120
accgatgtaa tgtccccttt aaagcctatg ctcgagaaag agcttctctg ggatagtttg     180
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cagggagaag aaccggaaga accgttccgt atgaaggacg ttatgctgat tgtcaccaat     780
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<210> 890
<211> 813
<212> DNA

<213> B.fragilis

<400> 890
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gctgtttttg gaacggaagg acaagatgta atcgcatgta tcggtccggg tatctctcta     540
caatcattcg aggtggggga tgaagtttat gaagcttttc gtttgaatgg ttttgatatg     600
tcgcgtatct ctttcaggca ttcggttaca cataagtacc atattgactt atgggaagcc     660
aaccggcaac agcttttgga ttttggagta ccgggagtac aaattgaaat agcggatatt     720
tgtacttaca tccggcatga ggatttcttt tcagcgcgaa gattgggcat aaagtccgga     780
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<210> 891
<211> 1263
<212> DNA
<213> B.fragilis

<400> 891
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ttagtgatct ctatgtcatt tgctttatta gcatatactc aaaagtctct gttttatctt     240
gatactgata ttataagata ctataacgct tattatccat ttatcgatca gtcttttgat     300
ttattctcac taatgtttgt attagagaat aatcttacat tttcgtttaa tttaattaat     360
gttcttttag tgtgtacttt tgctaatgtt cagataattt ctattttttg ggtttttttgt     420
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tgttttatat gtaatgaaaa taaacttaag attattttat tatacattat aggggttggc     660
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atgaacataa tatttatata tttaattatt atgtacttaa attataataa tcctgatgga    1020
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aattctattt ttcagatttt attctctaat gtggtagaat atttatcatt taaagcatat    1260
taa                                                                  1263
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<210> 892
<211> 1191
<212> DNA
<213> B.fragilis

<400> 892
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ggaaaatatc agtctgtttt tgaagatatt attcctatag tgaagggaca tgattattct     180
atagtgaatt tagagtgtcc tgttgttgag catgacgatt gtgctattaa gaagcaaggt     240
ccaaatttgt cttcgtcttt gagagctgta gaaattttga aattattgga ttttaatctt     300
cttaccttgg ctaataatca tttttatgat tatggagacg gaggtgttaa gcatacactt     360
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gaatgttgca aaaatttgga tttagatttt gttggtggtg gtgagtcttt atctgcagct      420
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catgaattct ctatagcaac acaaacgact ggtggctcaa acccattgaa tcctatatct      540
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cagagtccgg atatgttgaa agactccttt tatgctttct gtatgaccaa gaggcgttta     1020
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tatttaccat ctttttttatt ttctaaaaca aggttattta tccaaaactt tatggactgt     1140
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<210> 893
<211> 183
<212> DNA
<213> B.fragilis


<400> 893
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agaattactc ttatctttgc tatccgaaag gagaactgcg atgcagaagg attgcagaga      180
tga                                                                   183


<210> 894
<211> 1575
<212> DNA
<213> B.fragilis


<400> 894
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tatctcgaag cttttttcaac actgtatggc gacaggggat tcagaaggct ctggaaagaa     180
ggacgtgtgt tccggaatgc cgaatatact ttcagtggca cggaccgcgc atcagccata      240
gccgctattt atacaggcac cactccttcg gtcaacggca ttatcggcaa acgatggatg      300
gatgtatcga cactgcgtac tgtgagttgc gtcgacgacc ccgctttcat gggcaattat      360
acaaacgaaa gctcttcgcc ttcccatctc ctgacctcta cgatagccga tgaactgaag      420
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cttgcagcag gacatgccgg aaatggcgca ttctggctca caacacaac cggaaaatgg       540
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gaaaatacat ccgaccataa ggtggtgcgg aaagcgcata ttccgtctcc ccttattttt     1440
atgggcagcg gcgtaaaacc agccgtaatc aacacgcccg taaccattga ccacatagct     1500
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accgacatcc ggtaa                                                      1575
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<210> 895
<211> 549
<212> DNA
<213> B.fragilis

<400> 895
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acagacgaat attacagcct gattcaacca ccggagaatg aatattggcg tgcaaatatg   180
cttgtacatg gaataacgcc gggaatgaca gagtcactcc cgggatttca tgccatctat   240
cccgaagtca aaaagcgttt acaaggcaac gtagtagttg cgcacaatga acaattcgac   300
cgcaatgtac tgaagaatac catgcggatg tacggactgg attatgatga gttatcgctt   360
ccggaacgtt gggaatgtac ctgccgcatc tatcgttctt taggatacaa gccggtcaac   420
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<210> 896
<211> 408
<212> DNA
<213> B.fragilis

<400> 896
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tcagggttct catcatctaa ccagattatg ggtgtacgca aaactacaga ctttctggaa   180
aaagcaactt ggggcttagc tgcatttatg gttgtgatga gcattgctac tgcgtatgtc   240
gttccgactt cttcttctaa aacacaagat gtcattatgg aacaggcaca gcaggaagag   300
cagaccaacc cttataacct gcccgtaggt actactgcac cgaagacaga cgctgctgct   360
ccggttgaag cacctgccac agaaactccg gctactccgg caaactaa   408

<210> 897
<211> 1266
<212> DNA
<213> B.fragilis

<400> 897
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atgagcactg ttgcagctca acaacaacca attatttccc ccaaagactc tatcccctct   180
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gagtttaata attatgtaaa ctgctttctg gcgggagtat ctgccacttg gaatgtgact   600
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<210> 898
<211> 2697
<212> DNA
<213> B.fragilis

<400> 898
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<210> 899
<211> 783
<212> DNA
<213> B.fragilis

<400> 899

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acagaagttt tagaggaaga gcccagcctc gatcgtacgc tttccctgat cgatgctttt   360
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gaagatgaag atgatagctg tttcaccgaa acattggcca aaatatacgt caaacagcat   660
cgatattcca aggcacttga aattattaaa aaattaagtt tgaaatatcc aaaaaaaaat   720
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<210> 900
<211> 252
<212> DNA
<213> B.fragilis

<400> 900

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ctcaacagtt tccttttgga tatattcaag atggatgcca ttatggactt tctctataca   180
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<210> 901
<211> 936
<212> DNA
<213> B.fragilis

<400> 901

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gataaatata tggtcagaga ctatgtagct tcaaaaggaa tggctaaata cctcaatgaa   300
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cttattaaaa atattaattc ggaaacttca cttacagatt ataaaatgta ttgtttttgt   600
ggacatgtcc atagtttatt tgttctaaca gatagggata aaggtgctaa gataaatttc   660
tttgatcgga attggaatcc tttgaatgta aaatcagata gttatcctac ttctaatcaa   720
ttaatattga agcctaaaaa ttttgatcgt atgatagaaa tagcagaggt tttatcagag   780
gattttccac atgttcgtat tgatctatat aatattgatg gtaatattat ttttggtgag   840
atgacttttt attcaggaag tgggtattgg ggattcgtcc cagattcttt tgattttgaa   900
cttggtcaac agtttgatat ttcatctttt atttaa                              936
```

<210> 902
<211> 435
<212> DNA
<213> B.fragilis

<400> 902

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ggaactatga gcttgcataa atattcgatt gttttattgg cattattggc gttactctgc    60
agttgccatg atgaagataa aggagatatc ccacagtccg atgagcgaac cgcagatttt   120
```

```
attgtgaaat ataaggatga tttcggaata catacggatt ataaagctaa ggtatatatc    180
tattatggaa tatattcaat ggatattgta ggctttcatt atcttccgga cggggtgctg    240
gatcatgaag ggaaagaaat aactcctgac atccgtctat ctgctgatgg aaaagaagat    300
ataaccttgt tattggataa tgctgaaaag gtaacggtta ttgttgaaag ctcctattat    360
gagggaagag tgggaataac aagttactct tcgggcgaca cacctataaa agggaatatt    420
acgtttgggg aatag                                                     435
```

<210> 903
<211> 912
<212> DNA
<213> B.fragilis

<400> 903
```
gatttaatga gagtatctgt ggtaattccc tcatataata gggctaagtt gttattggag    60
acgattccta catatttgca agaggacgta attgaagtta ttatagtaga tgacgcatca    120
gttgataata cagctgaagt tgtaaagaag attcaggaaa aatatccaca agtaaaatat    180
atacgcaatg cggtaaataa gaaacaaacc tattctaaga atataggaat taaaatatca    240
aagggggact atatttattt gggtgatgat gatagtattt taatgcctaa ttctatccgt    300
tatttaaaag aaacaatgta taaatataat gcggatatct gtggtgcaaa agctctttat    360
cttccaatgg aatatgttaa taaaatagat gaatatgttc aacttaatga tattcaatta    420
gttgataaga atgagattgt tgatataaaa aagataaaag cttcatttaa ttactctact    480
gcattaccta tagttgttcc tttttgtcaa gcttgcgctt tagtcaaaaa agagttagcg    540
attcagatct tattcgatga aaactttaca ggtaatgctt atcgagaaga aacagatttc    600
ttcataagat gtactttaca aggagcaaag gtgatgtatg attcacgtgc tgtacaggtt    660
aacttacctc gtcaagtagc aacaggggga gcgcatagta gaggacgcat aaatggtac    720
ttatcgacaa ttgctaataa ttggtacttt cttaaaaaga attggaagaa tattcaaagt    780
tactataaat tctcggataa tatttataaa agacaattaa tgtttgtatt gaaaaatatt    840
tgttttgcct caaaagcagt agttaaaata ctaatgcgaa atttgggttt acttctgctt    900
tatgtatact aa                                                        912
```

<210> 904
<211> 192
<212> DNA
<213> B.fragilis

<400> 904
```
tgcattagga gccaacattt caggagtaat cacttcggcc atcattacag gcatttatat    60
aacgattata ccttatttat aaatcataga gttggtgaca agataatttt ggggatgact    120
atagagaatc attcggtggt tattggtaac ccggaaagat tgaaatctat agtcatccat    180
gtgtttctat ag                                                        192
```

<210> 905
<211> 240
<212> DNA
<213> B.fragilis

<400> 905
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cggatgagga gtgtaatgga agggataagt aaacaagcgg ggcaattcga tgccggcaat    60
ggaggtctgg aaggaatgaa acatgctact ttattggatt aaacggatt cttgtgtgac    120
gattttcaag agttcttcga aggagcttac tttattatat ttaagcttcc caccgtttgt    180
cttcgcaaaa tgttttttgg cacattcgat ctttgcctct tctattctcc gatcttgtag    240
```

<210> 906
<211> 1128
<212> DNA
<213> B.fragilis

<400> 906
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agcaggagga gaaaactaac aaataacaaa atggaagata acaaaataaa aattggcatc    60
```

```
actcagggag acataaatgg ggtaggatac gaagtcattt taaaaacgtt tgccgacccc    120
gtcatgttgg aactctgtac accggtcatt tacggctctc cgaaagtggc tgcatatcac    180
cgcaagtcgc ttgatttgcc tactaacttc agtattgtca ataccgctgc agaagctgcc    240
cacaatcgcc tgagcgtggt caactgtacg gatgacgagg tgaaagtaga gttctcaaaa    300
cccgatccgg aagccggtaa agcagctttg ggagcacttg agaaggcgat agaggagttc    360
agggaaggct tgatcgatgt catagtgacg gctcctatca ataagcatac gattcagtcc    420
gaaggatttg cttttcccgg acatacggaa tacatcgaac aacgtctggg gaatggttca    480
aaatcactga tgatcctgat gaaagaggat ttccggggtag cttttggtaac aggacatatt    540
ccggttcgcg agatagcctc ttcaataacc aaggaactga ttcaagagaa acttgccata    600
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ctgaatccgc atgccggaga cgacggattg ctcggtacag aagaacagga aatcatttct    720
cctgctattc aggaaatggc tgccaaggga atcttgtgct atggccctta tccggctgac    780
ggatttatgg gatcgggcaa tttcacccat tttgacggag tactggccat gtatcacgat    840
cagggattgg ctcctttcaa ggcattggcc atggatgaag gtgtgaacta cacggcgggt    900
ttgccggtga tacgcacttc tcccgcgcat ggcacagcct atgatattgc aggaaaaggc    960
gttgcttgcg aagattcatt ccgtcaggct atttatgtag cgatcgacgt attccgtaac   1020
cgtcaacgtg agaaggaagc acatgccaat ccgttacgta aacagtatta cgagaaacga   1080
gacgacagtg ataaactgaa gctcgataca gtagatgatg atatttaa              1128
```

```
<210> 907
<211> 519
<212> DNA
<213> B.fragilis

<400> 907
atgccgggga ggtgcgtctt gtattttccg gcggtcggta tacattgcat tttatttttc     60
aatctaaaat catactgtgt tatgtttagc ttattgttat ccacttttgc catgatgggg    120
cttaccttcg tcattggttt tttcgttgcc ggggtgataa agttgattgc ctctgcagct    180
gattcgttgg cttttttatag ttcgcaccag gaagaattgg cccggctgaa gcgtattcgg    240
aaactgcatc agaaagtagc tacgttaata actgaaagtg ctctgagtga tgaggagtat    300
ggcagtgatg ggcgtgaaga cttcagcagg ggggtcacaa aacatcccgg agataatcgt    360
gggttttatc atggtgtcag tcccggtgaa tcggagagag gtttaatgga ttattttttat    420
ccggaagaca caagaacgat gtttcttcgg aaagaagaac agatgttaca gcatgataaa    480
aaaaataata agacatcctc aaccaataaa aaacaataa                           519
```

```
<210> 908
<211> 372
<212> DNA
<213> B.fragilis

<400> 908
aatatgaaag gtatttatgc tatttcgttg ttggtcgttt ccaacatttt tatgacattt     60
gcctggtacg ggcatttgaa gctacaggaa acaaaaataa tcagtaattg gcctttgtat    120
ggcgtggttt tgttttcatg ggtgattgcg ttggctgagt attcttgtca ggttcctgcc    180
aaccggctgg ggttcagcgg aaacggaggg ccgtttttcat tgatgcaact taaaattatc    240
caagaggtga tcacactgat tatatttacc gtttttttcta ccttattatt taaaggggag    300
tcactgcatt ggaatcatgt ggcagctttt gtctgcttga tagcagcggt atatttcgtg    360
tttatgaggt ag                                                         372
```

```
<210> 909
<211> 1323
<212> DNA
<213> B.fragilis

<400> 909
tctataatta tgaagattgc tatagttggt acaggttacg ttggtttggt tacaggtacc     60
tgtttctctg agatgggagt agacgtcaca tgcgttgatg tgattgaatc taaaattgat    120
aatcttaaaa aaggcataat tccgatctat gagccgggac ttgaagacat ggtgcaccgc    180
aattacaatg cggggcgttt gaagttcact acttccttag cctcatgttt ggatgatgtt    240
```

```
gaggttgtgt ttagtgcagt tggtactcct cctgatgaag atggcagtgc ggatttaaag    300
tatgtgcttg aagttgcccg tacgattggt aaaacgatga accattatgt actggtggta    360
acgaagagta ctgttcctgt cggcacagcg caacaggtga aagctacgat ccggggtgaa    420
ttggataaac gcggtttgaa tcttgaattt gacgtggcct ccaatcctga atttctgaaa    480
gagggagatg ccgttgatga cttcatgaag ccggatcggg tagttgtggg agttgagtct    540
gagagagcca aatctatcat ggagcgtttg tataaaccgt tcatgatgaa taattatcgt    600
ttgatcttta ctgatatccc ttctgccgag atgataaaat atgcggcaaa ttctatgttg    660
gccactcgta ttagtttta gaacgatatt gcgaatcttt gtgagttggt tggtgcaaat    720
gtaaatatgg tccgtaaggg gatcggtgct gattcccgaa taggtagtaa attcctatat    780
ccggggttgtg gatatggtgg ttcttgtttt cctaaggatg taaaagccct gataaaaacg    840
gccgataaga atgggtattc catgcgtgtg cttaaggctg ttgaagaagt taataattct    900
cagaaaagta ttcttttaa taagttgatc agatattttg atggaaatct ttcgggaaag    960
cgtattgcgt tgtggggggct gtctttaaa ccggaaacgg atgacatgcg cgaggctcct   1020
gctctggttc taatagataa gatattgtct tgtggcggtc ttgttaaagc ttatgatcct   1080
attgctgttg aagaatgtaa acggcggata ggggacagca tagagtatgc caatgatatg   1140
tatgatgcgg ttcttgatgc ggatgccttg ttactggtta cagagtggaa agagtttcgt   1200
atgcctagct ggggtgtatt gaaaaagacg atgaatcgag ctttgattat cgatggcagg   1260
aatatttatg ataagaaaga actgcatgat atgggttttg aatatacgtg tattggacag   1320
taa                                                               1323
```

```
<210> 910
<211> 2100
<212> DNA
<213> B.fragilis
```

```
<400> 910
ggaccctcta tctttgctgt ctcaaaaaca aagattatga tgaaagtaaa attagcatta    60
ctacttactc ttataggaac acttccttta gcagcacaga atgtacggca agaacaggac   120
acagtctctt atatgaacga tgatcctttc aatcttgaac aaattgtggt tacggcaacc   180
cgaacagaaa agaagattaa gaacacaccg gtcatcactc agataatcac ctctaagcaa   240
atagaagaaa gaggaaccgg taacattcag gaccttctga ctcaagaggt tcccggactt   300
aactttcagg aggttggcta tggaaccagc atcgatatac agggattagg ttccaaacac   360
atcctttttcc tgatagacgg cgaacgtata gcgggcgaaa acggtggcaa catcgactat   420
tcgcgaatca atctttataa tatcgaccat atcgaaatag tcaaaggagc ttcttcggcc   480
ctctatggtt ctcaagcgat gggcggagtt atcaacatca ttacgcgtaa agccaaaaag   540
aaattcgagg cttccgcagg catacgctat gcaggaagaa accagcaaaa ctataaagat   600
actcccaaag atcattcgca atacaaatat cggattcatc tggataaacc caatctgaac   660
accaatctgt ctcttggatt gaacctgggc aagttcacca tgaacaccga cgtactttac   720
aaaagtttcg atggatacca attattcgat aaaaaacctc tcgtgaaata ttttccggcc   780
tataacacca caattaccga agaactcagt aaaaccccga ccagtatatc gggatacgaa   840
gacgtacaag tagcccataa aatggactat cgtttcagca aacggctcaa agtccagtta   900
aaaggaagct attatatgct gaacaaatat gattttcaag cagataatat attcgagaaa   960
tcagaggact ataccatgg cggaagcata gattacacga tttccgacaa atcctctttg   1020
gtagcctctg ttcataccga tcactacaac cgatatgata aatacgaact gaagagcggt   1080
cgtcgtctcg aatataaaaa caatattatc cagccccgta tcgtatatag cactacggcg   1140
ctcgataaac agaccattac gggaggattg gaatattaca gagaatcatt attcagtgat   1200
aaatttgaaa ccggtgtgaa agaaaacaaa agccaatggt atgccaccgc tttcctccag   1260
gatgactgga gcatcaacaa gcaattctcc gtaatagcgg gactccgctg cgactatcac   1320
gagaaatacg gtaccaacct cactcccaaa gcttccgtga tgtataagat ctttccattc   1380
actgtccgct ttaactatgc acgcggctac cgttcaccca gcattaaaga gttgtacatg   1440
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aacaattata tctctctttc gggagaatat gtgaacagtt ggatcaatat caatgccaac   1560
gtttatagca actggttccg aaacaaaata gaaggaatgt ggagcaatga ccaaacggaa   1620
ctccattata tcaatatagg aaaaagccgc ctggcaggag tagagaccat gtgcaaaata   1680
caaataaaca gacatatcaa tgtgcatgga gcatacaatt atctgtacac aagcaaagat   1740
gcggatggag tccgattgag ctcttccagt ccacattccg gtaatattcg tgctgaatat   1800
aacacacgca tcccacgcta tgccaccgtt gtcaacctgt ccgggaatat tatggggaaa   1860
aagaaattcg atgtgttgga tgaactggaa atagacggaa agaaggtaga agcctactat   1920
caggctaaag taaaccctta ttgtctttgg gatctgacag tatctcaata tatcatgcag   1980
```

```
aatctgagaa tcacagcagg aataaccaat ttattcgatt atacttcaga tcgagtgact      2040
ttcaatactt ccacttcacc gggaagaaac tattttatcg catgtaatta tacactttaa      2100
```

<210> 911
<211> 1179
<212> DNA
<213> B.fragilis

<400> 911
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ttcatatcta ttgcaaaaga aatgactatt gcatttgttt atcgaaattt tccttcattg        60
ggaggggttg aaagggttat agtcattttg gcaaatgaaa tggtaaagca agggagtaaa       120
gtagttattt attctttaga gcaaggactt aatgcttatt ccctggattc ttctattgaa       180
ataatttgtt tacctcaaaa aaaaatattg gagtcaaaag aaaatgtgaa ttttctaata       240
acacatttat gtgaatataa aatcgaattg ctgtttaacc atgattctgt gaaagatagt       300
attgaactct gcagaagagt gaagaaaaag ataaatattc ctgtagtaac acttcatcat       360
ggacaaatat atttgccatg gaagtcacaa tgggctattt tgaaagataa atatagtttg       420
cgtgtatgtc ttaaaaaaat attttttcct tttttgtgc ttgctactaa agtaaggaat        480
aatttgcatc atcgatataa tatcaaggta tgtgatgtat atgtttttt ggcagagtgt        540
tataaagatc aattaggaat agataaaaaa gtaatggcta ttccaaaccc attatcttct       600
tctttctttt ttgaggatga ttgctatcag agcaaatgta atactgttgt gatggtaggg       660
cgtattagtg attttcataa acgcattata ttagctttga gaatctggaa ggagatagaa       720
aactgtgaac aatttgattc ttggaatttt gatatagctg gagatggtcc cgactttat        780
ttaattcagg atactatttg ttccttaggg cttaaaagag ttcgtttact gggcaagtc        840
aattcatttg atgtttataa aaaagctaaa atattacttc ttacaagtgc ttttgaagga       900
tttcctctgg ttttaaatga agctaaacag tgtgcatgtg taccaattgc aatggatagt       960
tttgaatctg ttcatgaact aattaataat ggtgaggacg gattgattat ttcaaataat      1020
gatttaaata cttttttgga gggattaaaa tatttgatgt cacataatga tattcttcgt      1080
gaaatgtcaa aaaaatcagt gctaaacact cgtaaatatg aggtctccag attatgcaat      1140
atctggatgg atttatttaa gtcaatagtt aataactaa                             1179
```

<210> 912
<211> 789
<212> DNA
<213> B.fragilis

<400> 912
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actctctata tatcaaatca aatgcagcta acattaatgg aacagaaaat ctcaaaatat        60
tctaccgcta caatcgttag cctgctgtgc ctcttattca gccttccgct ccaagcacaa       120
cagcaaagac ccggtgcacg tcctgctgtc aagcagaaag caaaagagga gataaaagcg       180
gatacgattc ccttttacaa tggaacgtat gtcggtgtgg acttattcgg attgggcagt       240
aaactactcg gaggagattt tctaagttct gaggtaaatg tgagagtaaa cttaaaaaag       300
aaatttattc ctacagtaga aatcggtttc ggacaaacag atacctggag tgataccggt       360
atccattata aaagtgccgc tccttatttt cgcgttggag ctgactataa tgttgttaaa       420
gaatatttgt atgtaggact acgttatgga tttagcagtt tcaagtacga catctcaagt       480
acacctttt ctgaccctat ttatggaggc agtatggcta atcccggatt gatagacggc        540
atttggggag gaagcgtacc ttatcattac aacggactga atctaacat gcaatggctt        600
gagctggtgg ccggagtcaa tgttcaaatc tataaaagct ctatatggg atggacctta        660
cgctttaaat ttaaaacagc gggctcgatc agcgaacatg gaaatccatg gtatgtaccg       720
ggttttggtg aatatgattc ctcaaacata ggtatcacat atacactgat ttataaatta       780
ccattttaa                                                              789
```

<210> 913
<211> 1035
<212> DNA
<213> B.fragilis

<400> 913
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aatcctaata ttcacttaaa atcaagcaca attatgaatg tcgaacctat gtatctgact        60
atcttcttga tagcgggagg tattatcttc ctggttcttt tctttcatta tgtacctttt       120
```

```
tttctatggc tatcagccaa agtatcagga gttaatatct cttttggtaca actttttctg    180
atgcgtatcc gtaatgttcc gccatacatc atcgtaccgg gtatgattga agcacataaa    240
gcaggtctga gcaacatcac ccgtgatgaa cttgaagcac actatctggc aggcggacac    300
gtagaacggg tagtccatgc attggtatct gcatcgaagg ccaatatcga acttccattc    360
caaatagcta ctgcaattga tcttgcaggt cgcgatgtct tcgaagccgt gcagatgtcg    420
gttaatccta aagttatcga cacaccaccc gtaacagctg ttgcgaaaga cggtatccag    480
ctgatagcca aagcacgtgt gacggtacgt gccaatattc gccaattggt gggtggtgcc    540
ggcgaagata caatcctggc acgtgtaggt gaaggtatcg tttcgtcaat cggttcctct    600
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ggactcgatg ccggtactgc atttgaaatt ctctctattg atatcgctga tattgatata    720
ggtaagaata ttggtgctgc cctgcaaata gaccaggcaa atgccgacaa gaatatcgcg    780
caggcaaaag cggaagaacg ccgcgcaatg gctgtggcta ccgaacaaga aatgaaagcc    840
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gctgaagctt tccgtagtgg aaatctcggt attatggatt attataaaat gaaaaatatt    960
caagctgata catcaatgcg tgaaaacata gctaaaccta tcggtggagc taccagtaaa   1020
ccgttgagcg attag                                                    1035

<210> 914
<211> 738
<212> DNA
<213> B.fragilis

<400> 914
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ccggcgaccg catcactatc ggtggttgga ttggagagtc tacaacgatc agataaatct    120
atgttgcgac aacaaagtaa cagtttatta aataaaagtt tgagcataac aattgtcttc    180
ggggcaattg ttatgcttct tttattttct tcctgtggtg ggagaaataa ggcgatggcc    240
gatgccatta ccgagcggga ttcactgcct gttatggata cacggggggt aacgaccctt    300
atatccgatt ccggtgtcac acgttaccgg gtcaacactg aagaatggtt gatctttgat    360
aagaagaaac cctcgtattg ggctttttgag aagggcattt atctggaaca gttcgattca    420
ctctttcata tagatgcgag tataaaggcg gatacggctt attattatga tcgtgaccgg    480
ctttggaaac ttattggaaa tgtagatatt aagagtctga agggcgatca tgtgaccacc    540
gagttgttat attggaatga agccaccaag aaagtgtata ccgataagtt tgtccggatg    600
gaaaaaccgg atcagattat gaccggatat ggctttgagt cagacgatca gtttatgaag    660
ccggttgttc ataacatatc cggtatagta tatatcgatg aagatgccga aaaggcaaaa    720
acagattctg taaactaa                                                  738

<210> 915
<211> 747
<212> DNA
<213> B.fragilis

<400> 915
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tgtgccaaca tatcgggtag ggcacagaac aaattttcgg atatggaggt caatcatgtc    120
cgggtggcta caccgggact ttttttccaag gagaattgtg tcatgctgga tctgaagtcc    180
ctgtcacgga attactcttt ccctttgccg ggaggcaaag tcatttcggg ctatggaaca    240
cgtggaggcc atagcggtga cgacataaaa acttgtgccc gcgatacgat tcgtgcagct    300
tttgacgggg tggtacgtat ggctaaacct tatggtgcgt atggcaatgt gattgtgata    360
cgacatccca atgggttgga gacggtatac agtcataatg tgaagaatct ggtaaagagt    420
ggggatgtgg tgaaagccgg aatggctatt ggcctgaccg gacgtaccgg acgggctact    480
accgagcatc tgcattttga gacgcggatt aacggacaac actttaatcc cggtcttatt    540
tttgatatga agaagggaac cttgcgtact gattatttgc aatgtacgaa gaaaggtaag    600
ggaattgttg ttaaagcttt gaaaagcgaa aaagtccttc ctaaatataa aactctttcg    660
cctttcctat atgaactgcc cgggattaaa aaaccggtat ggaatatacc agccctagcg    720
agatccgctg cgtattcggg tctatag                                        747

<210> 916
<211> 204
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<212> DNA
<213> B.fragilis

<400> 916

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tccgtatgta ttccgaaatc atccttatat ttcacaataa aatctgcggt tcgctcatcg      60
gactgtggga tatctccttt atcttcatca tggcaactgc agagtaacgc caataatgcc     120
aataaaacaa tcgaatattt atgcaagctc atagttcctt ataatttatt agttctcaat     180
atgatattac ttccaaatat ataa                                            204
```

<210> 917
<211> 1158
<212> DNA
<213> B.fragilis

<400> 917

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tatttcatct tttatttaat aatattaatg tataaccttt tcatcgtagt taacgttgat      60
tggttttttc tctctcatcg caaagatatt gcactaactg ctcaaaagtc tggttacaat     120
gtcactatcg taaccaagga taccggaaaa aagaaagata ttgagtcact tggcctgaag     180
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<210> 918
<211> 1422
<212> DNA
<213> B.fragilis

<400> 918

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<210> 919
<211> 2868
<212> DNA
<213> B.fragilis

<400> 919
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gccagttcta aaaagtaggtg gagtaaccaa agttcatacg gaggcgatct gattttcgac    2760
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<210> 920
<211> 249
<212> DNA
<213> B.fragilis

<400> 920
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aattcaggat tggaggccac gtcaaattca agattcaaac cgcgtttatc caattcaccc     180
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<210> 921
<211> 1521
<212> DNA
<213> B.fragilis

<400> 921
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<210> 922
<211> 2154
<212> DNA
<213> B.fragilis

<400> 922
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ccacaccaat cgcatgatgt aggcgaagtc aatggagaaa ctctttctgc tcaggactac     180
cagaacatgg tagaagaata taccgaggtt atcaagttct caagcggaat gagttcattg     240
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<210> 923
<211> 1284
<212> DNA
<213> B.fragilis

<400> 923
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<210> 924
<211> 657
<212> DNA
<213> B.fragilis

<400> 924
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<210> 925
<211> 1458
<212> DNA
<213> B.fragilis

<400> 925
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ctattgcaaa agaaatga                                                  1458
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<210> 926
<211> 579
<212> DNA
<213> B.fragilis

<400> 926

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gcagaaatta aaaacggcac agaactgggt aaaacagcta aaggctacat tgatcaggga   180
cagttgattc cggatgaatt gatggtagac attctggcaa gtgtgtttga tagtttcaaa   240
gatagcaaag gggttatttt tgacggtttc ccaagaacta ttccacaggc tgaggcgttg   300
aaagtgatgt tgaaagaacg tggtcaggac atctctgtga tgttggatct ggatgttccg   360
gaagaagaac tgatgactcg tctgattaaa cgtggtaagg aatcgggccg tgcagatgat   420
aatgaagaga ccatcaaaaa acgtttggtt gtatataata cacagacttc accgttgaaa   480
gaatattata aaggcgaagg caaataccag catatcaatg gtcttggaac catggaaggt   540
atcttcgaag atatttgtaa agcggtagat acattataa                         579
```

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<210> 927
<211> 474
<212> DNA
<213> B.fragilis
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<400> 927
ttctattgga tattattact cttctataca aataaaaacc gaaaagaatc gacgaatcat    60
aattcattcc ttttttaaaat gaaaaattct ctgtgtaatt ctgtgtcctc cgtagtgaag   120
aaactcttgg agtatggcga ggacggtact cctgtctatg tgaatgaact tactgcgtta   180
aatcaagaac tccgtaactt gtgtgctgat cttcttcttc agaaaggaga atctcccgaa   240
gaagaggctg aaatacttgt tactttgttc aaaggttacg ataccatgct gtttaatttt   300
tcctctgaga tgaacaggt tattcaagaa ttattggatc gttcaatgac tgttttagaa   360
aaactaccag cctctgtatt gaaatgtcag ttgctgctgg agtgctttga gcagacggga   420
gatgaggaac tgataagaga agtgaaattt acttttgaga gttgtggtat ttga         474
```

```
<210> 928
<211> 1965
<212> DNA
<213> B.fragilis
```

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<400> 928
aagttatact ttattatttt atctttgttc gcgtacagca agacaaactt tatggctatg    60
gcacacacac tggattcatt cccggatacc ggagaccttg agaatttgaa agataattat   120
cagaaaatca cttctgtcct ggcaggacat cagattgcat tttgggaata tgacattcct   180
acaggagagt gtaatttcac agatgaatat ttccatattt tagggttgaa ggaggccgga   240
atcatattca gagatattaa tgactttat cggtttgccc atccggagga tgttatctct   300
taccaaacga cttttgcgcg gatgcttgaa tcggaaacca aaatctccca aattgtggta   360
cgttgtgtag ggaggcaagg agaaacaatt tggcttgaag ataatttat tgcttataag   420
aagaataagg agaatggctc tgataaaatt atagcatata ctgccaatat cacttcacgt   480
tgtgaaaaag aagtccagat caggcagctt gaggaacgaa accggaaaat tattgaagca   540
ctaccggagt tcatatttat ttttgatgat aattttttta ttacggatgt attgatggca   600
cccgatacag agttgttgca tccggtggaa gtgttaacag gagcagatgg gcgatctatt   660
tattcttctg aggtcagtga cttgtttatt agcagtattc atgaatgcct aaaaagtggg   720
aaattaaaag aaatagagta tcctgtggat gtcgaagccg gcagacattt ttttcaggca   780
cgcattgctc cgtttgaggg aaataaggtg ctggccttga ttcatgatat tggtgatcgg   840
atgcgacgtt cgcaagagct acttgaagcc aagcaacggg cagaagaggc tgatcggatg   900
aaatcagtat ttctggccaa tatgagtcat gagatacgta ctcctttaaa tgctattgtg   960
ggcttttcgg aaattatagc tttgactgag gatgaaaagg agaaagaaga gtatttaggg  1020
atcattcagc agaatagcaa tctactgtta caactgatta atgatattct cgatttgtca  1080
cgaatcgagt cgggtaagtc ggaaatgcat tgtcagttga cggaaatgag cggattggta  1140
gatgaagtgg ataaagtaca tcgtcttaaa atgaaaaaag gagtcaagct gaatgtgatt  1200
cgtccatcag aggaaatttg gatttcgaca gataggaatc gggtgacgca ggtattgttc  1260
aatttcttgt cgaatgcaat taaaaaatacc attgagggta gcattacttt cggacttgta  1320
aaagaggaag aatgggttaa acttatgta acagataccg gctgcggtat ttccaaagag  1380
aaattacctt tgatatttac ccgtttgag aagttgaatg attttgtaca aggaacaggg  1440
ctgggattac ctatctgtaa gagtattgta gagcggttgg gtggtcggat tgaagtggaa  1500
tccgagcttg ggcagggggag tactttcatt ctttatttgc ccaataggca agtacaggaa  1560
gttgtggttg gcgaaagaga aaacgcagca ggtaatatgg gagtggagaa ccggcagaag  1620
```

```
aagatactga tagcggaaga tgtggagtcc agttatctgc agattaatgc ctttctgaaa   1680
aaagaatata cgattctttg ggtgcctaat ggagaagaag ctgtgaagag tttcatacgc   1740
gagaagcccg acttgatttt gatggatatc cgaatgccgg tgatgaatgg tattcaggca   1800
acagcaaaaa ttcgtgctat ctcgcaagag ataccgatta tagcaattac agcatatgcc   1860
ttttgtccgg aaggagagcg agctcttgaa gcagggtgta atgaagtgat tgcaaaacca   1920
tatcctctgg agaagctgaa agaaacgatc gaaacttatt tatag                    1965
```

<210> 929
<211> 633
<212> DNA
<213> B.fragilis

<400> 929
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ccggatagct ttattaactt taacaggcat aaattccata ccaaacaata ttatttgtac   60
ctttgtgcgc tatttattaa taaaatgaca gaaagcagaa gtaacttaca aaaatatgcc   120
atgcattttg gcacctatat gggagtatac tggatactta agttcattct attcccattg   180
ggattgtcca ttccgtttct tttattcctg ttttcgggc ttactttagg agttccgttc   240
atgggatatt attatgcacg tacctatcgt gacaaagtat gtggcggctc gatccgcttc   300
ctgcaagcat gggtattcat cgtttttatg tatatgtttg cggcactcct cacggcagtg   360
gcccactaca tttatttccg gttcatcgac catggtttca ttgtaaacac ttacatggga   420
atgtttgacg aactgaccaa taaagaagta ccgggaatag aagggtacat cagccaactg   480
aaagaagtga tggaaatgat cagtagattg acaccgatag acattactat gcaactgatg   540
tcacagaatg tgttctatgg cagcatattg gctgtcccca ctgccttgtt tgtgatgaga   600
aagcccaaat caccggaggt gcaacctcta tag                                 633
```

<210> 930
<211> 3885
<212> DNA
<213> B.fragilis

<400> 930
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aattttatag taaaaatcat gaaaaacgca attggtaatt gtaggcagcg aaaagcagtg   60
ctgttcgccc tcgctttgcc tctgatgttt tccggttcgc ctgcgcaggc aatgcacagg   120
tccgaaatcg ttagagaagt gacacaacaa aacttgaaga tcgttagtgc aaagaaaatc   180
aatccgacaa cgattgaagt attattctct aataatcaga gaatgacatt cgatttctac   240
ggggaaaaca tcttcagagt atttcaggac aatgccggag gaatcatccg tgatccggaa   300
gcaaaacctg aagcacaaat tctggtaaac aatcccagaa acacagtttc tacactcaac   360
ttgaatgatg gcagcaatct catctctatc actacgggga aaatcaaagt ggaaatcgac   420
aagaatactt ctttgatgaa agtgattgac ttggaaaaga atactgttgc ctttgaagag   480
gtagaacccg tactgttcga taagggaaaa gtgactgtaa ccctgaaaga aaatcccaat   540
gaatattttt atggtggcgg tgtgcagaac ggacgttttt cacacaaagg aaaagccatt   600
aatattgtaa acgagaatag ttggactgac ggtggagtag cttctcctgc gccattctat   660
tggtcgacca atggctatgg tatgatgtgg tataccttca aaccgggtaa atatgatttc   720
ggtgcagacg agaagggaaa agtgaaactt acacatgatt ctccatatct cgatctcttt   780
tatatggtta gcgacggagc tgtgggcgtg ttgaatgatt ctatcagtt gaccggtaat   840
ccggtgttgc tgcccaagtt cggtttctat cagggacatt tgaatgctta caatcgcgac   900
tattggaaag aagacgaaaa aggaatcttg ttcgaagatg gaaagcgtta taaagaaagt   960
cagaaagata tggcggaat caaagaatca ttgaacggtg aaaagaataa ttatcagttc   1020
tcggcccgtg cagtgattga ccgttacaag aatcacgata tgccgttggg ctggctcctg   1080
ccgaatgatg gatatggtgc cggatacgga cagacggaga cactcgacgg aaacattcag   1140
aatctgaaaa gtctgggtga ctatgccgt aagaatggcg ttgaaattgg attgtggaca   1200
caatcggatt tacatccgaa agaaggcgtc agtgcattgc tgcaaagaga tatcgtgaaa   1260
gaagttagag atgccggtgt gcgtgtgttg aaaacagacg tagcatgggt cggttgggga   1320
tattcgttcg gattgaatgg agtggcagat gtgggtcaca ttatgcctta ttacggtaac   1380
gatgcacgtc cgttcattat ttcacttgac ggttgggccg gtacgcaacg atatgccgga   1440
atctggtcgg gtgaccagac aggcggtgta tgggagtaca tccgtttcca tatcccgact   1500
tatatcggtt caggcctgtc aggccaacct aatatttctt cggatatgga tggcatcttt   1560
ggcggcaaga atatgattgt caacaccaga gacttccagt ggaaaacttt cactccgatg   1620
cagttgaata tggacggatg gggatctaat gaaaagtatc ctcacgctct gggcgaacct   1680
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gccacttcta tcaatcgctg gtatctgaaa ctgaaatcgg aattattgcc ttacacttat   1740
agttttgcaa aagaggctgt aaccggtatg ccgcttatcc gtgccatgtt cctggaatat   1800
ccgaatgctt acaccttggg aacagctacg cagtatcagt ttatgtatgg taccgatttt   1860
ttagtagccc ccatttacaa agctaccaaa gcagatgcta aaggcaatga tatccgtgat   1920
ggcattttatt tgccagaagg agagtggatc gattattttta ccggagagaa atatcagggt   1980
aactgtgttc tcaacaattt tgccgctcct ctctggaagc ttccggtatt cgtaaagaac   2040
ggagctatca tcccgatgac caatcctaat aataacgttg ctgaaattaa taagggactt   2100
cgtatctacg aaatctatcc gtataagcac atgatgaccg ttgaatatga cgatgacggt   2160
atatctgaag catataaaga gggtaaagga accactactt tcattgaatc gaatgttgat   2220
tcaaagaata atgtgaagat ttctattcgt cctacacagg gtgatttcga cggctttgta   2280
aaagagaaag ccacagaatt cagagtaaat gttactgcta agccgaagaa ggtttctgct   2340
cagataggta aaggcaaagt gaagttgacc gaagtgtctt ctatggatga tttccggaaa   2400
ggtgaaaacg tatacttcta tgacgctgct cctaatttga ataagtttgc tacaaagggc   2460
agtgaatttg agaagaaggt tatcactaag aatcctcaag ttcttgtgaa actggccgct   2520
accgatatta ctaaaaatca agttgtaatg gatatcgaag cttccaata tgcacctgcc    2580
gataattaca gagtaacctc cggttcgttg accgctcctg ctgcccgaat tgctgccgaa   2640
gatattgagg cttatacctt gaagccgaca tggaacaaag tgccgaatgc tgatttttat   2700
gaaatagaat tcaatggcat gctgtataca acaataaagg atactgagtt gctgtttgac   2760
ggactggctg ctgaaacaga ctatacattt aagattcgtg ccgtaaacaa ggatggctat   2820
tcggattggg ctgaattcgg tgctaagaca aaagctaatc cgctggaatt tgctcttcac   2880
ggaatcaagg gtgaaacaac tgcgaagaat caggaaggat ttgatatcga tcgtttgttc   2940
gattttgccg agctgggtga tatgtggcat acgaagtatg gagcaaaagc actgccttat   3000
gatatgatta tcgatctgcg aacagtgaac cagctggata aattcgaata cctgccacgt   3060
accgatggtg gtaacggaac gatcctgaaa ggtactgtat attatagtat ggataaggaa   3120
aactggaccg aggccggagc aatcgactgg aaacgtaatg gtgatgtgaa agtatttaca   3180
tttactgaac gtccgactgc acgctatatc aaactggctg taacagaagg tgtaaacaac   3240
tatggttcgg gtagggaatt gtatgtattt aaagttcccg gaaccgagag ccgtttgcag   3300
ggtgatatca ataacgatgg taagatcgac aataacgatt taacctcgta taccaactat   3360
accggtctga gaaaaggtga ttccgactat gaaggctata tcagtgtagg cgacattgat   3420
cagaatggtt tgattgacgc ttatgatatt tctgtagtgg caacacaatt ggaagatggt   3480
gtaagtgaag agccgattga gaaactggat ggtaccattg aaatcagtac tgctaaacgg   3540
aattacagta agggtgatgt tgttgaagtg cttgtaaaag gtgtcaacct ccgctctgta   3600
aatgcgttga gttttgcgtt gccatacaat cagcaggatt atgaattcgt gggtgtagaa   3660
cctctgaacc tcaaagctat ggaaaatctg acttatgaca gactccatac caatggtaca   3720
aaagcactct atcctacatt tgttaacctc ggagctaaag aagccctcga aggaacaaac   3780
gatctgtttta ttctgaagct gaaagcgaaa cgcgctgtga agtttgatct gaaagctatt   3840
gatggcgttt tggtcgacaa gaacctgaac acacgtaagt tttaa                    3885
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<210> 931
<211> 1050
<212> DNA
<213> B.fragilis

<400> 931
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atatttgtag taaatatgcc caaatatccg cttttaggaa tgacccttac cgaattgcaa    60
tctgtcacca aagatttggg gatgcctgct tttgcagcca aacagatcgc ttcctggtta   120
tacgataaaa aagtgacttc tattgatgaa atgaccaatc tgtcgttgaa gcatagagag   180
ttgctcaagg gagagtatga tttggggata tccgcgcctg ttgatgagat gcgttccgta   240
gatggtacgg tgaagtatct ttatcaggtg agtgacaatc attttgttga agcggtgtat   300
attccggacg aggatcgggc gacattgtgc gtgtcttctc aggtaggctg taaaatgaac   360
tgtaagttct gcatgacggg taaacaagga tttaccgcaa gtctgacagc caatcagatc   420
ttgaatcaaa tcgcagcatt gccagagcgg gataagttga ctaatgtcgt gatgatgggg   480
atgggcgagc ctatcgataa tttggatgaa gtattaaaag cactgcatat cctgaccgct   540
tcgtatggat acggatggag ccccaagcgt attactttgt cgtctgtagg attgcggaaa   600
ggacttcaac gctttattga agaaagcgaa tgtcatctgg ctatcagtct gcattctcct   660
tttccttcac aacgttctga gttgatgccg ccgaaagggc ttctcgat aaagaaatg      720
gtcgatctgt aaaaaaacta tgattttagt aaacagcgca gactttcgtt tgaatacatt   780
gttttttaagg gcgtcaatga ttcgctgatt tatgctaagg aactgttgaa attgctgcgt   840
gggcttgact gccgggtgaa cttaatccgg tttcatgcca ttcctggggt agacctcgag   900
```

```
ggtgccggta tggagactat gacgtcattt cgtgactacc tgacctcaca tggactgttc        960
actaccattc gggcttcccg gggagaagat atttttgccg cttgcgggat gttatcgacg       1020
gctaaacagg aggagagtaa caagaattaa                                        1050
```

<210> 932
<211> 228
<212> DNA
<213> B.fragilis

```
<400> 932
aactgtgcag ttcagcagat gatacctgct tttgcgtcgc tttcgttcat cgtttataaa         60
gaaagggagg cagagcagat gccccggatg gaagacaaac agcaagtaat tggagcctac        120
cgtggggtgt tcggagaaaa gagcaaggaa agcgatgatg catcctgcga tacccgctgc        180
cgcaaacact gcgatatcca gtccccaaag actctttttc ttgcgtag                     228
```

<210> 933
<211> 207
<212> DNA
<213> B.fragilis

```
<400> 933
aatgaggaag tggtaaccac ttatgtaggt gcaaagatag ataatattcg tcatatagaa         60
agaaaaagag ggtggatttt agatatttta ttcattccgg aaagaaacac aggagattat        120
actaactttg tattttcaga atgtaacaaa gacaaccaac aaaatctcaa aacaacatct        180
attcattatg gtcaagaaaa tcattag                                            207
```

<210> 934
<211> 198
<212> DNA
<213> B.fragilis

```
<400> 934
cgcacaaagg tacaaataat attgtttggt atggaattta tgcctgttaa agttaataaa         60
gctatccggt cagaaaaaaa acattttttt ttcgatttta aatatctgaa aagtaggagc        120
ttaccggtaa agcatgcaaa aaaataccga tcccctattg caggtttaat aaaaatacct        180
acctttgcac ccgggtaa                                                      198
```

<210> 935
<211> 183
<212> DNA
<213> B.fragilis

```
<400> 935
tttttttctat tttcattgtt tctcttgttt tttagtctct gcaaatttac tcacttatgg        60
gaagcggaag aatcactatt aataggtatt ccgttcgggt tccttcccta taaatcagta        120
tcattacttt tatattataa aacaaagaaa agagaagaaa ggttcaatcg tcttctattt        180
tga                                                                      183
```

<210> 936
<211> 192
<212> DNA
<213> B.fragilis

```
<400> 936
agagaacaat ttagtattac cggcaatgcc ggaccttata aaacagcaac ccatgtcgtt         60
atggaatttc tgtttggaac ttcatgtcgg tcgttgttat tccccattct taggtgtttt        120
ttcagatcta ttcgttttta tttccggcct tctgctaacg ttaatcctta tttcgggata        180
tatcgtatat aa                                                            192
```

<210> 937
<211> 198
<212> DNA
<213> B.fragilis

<400> 937
gaagtgtttt tcacttcagc atatatagca gcccctgcaa aaacaggaca tgcttctttt   60
aactctttcg atacaataat ggtatacata ataaatcaaa attttatcta tcagctattt   120
atcataatgc ccgacaaaat acgtccggac tttatgccca atcttcgcgc tgaaaagaaa   180
tcctcatgcc ggatgtaa   198

<210> 938
<211> 1260
<212> DNA
<213> B.fragilis

<400> 938
atattttatt cattccggaa agaaacacag gagattatac taactttgta ttttcagaat   60
gtaacaaaga caaccaacaa aatctcaaaa caacatctat tcattatggt caagaaaatc   120
attagtatct gtgctgccgg tatgattgta gccagttgct ccccccaaaaa gacaacagct   180
cagccgacag atccgtcaac cactgacagt gaattaacaa tgctggtcgg aacttacact   240
tccggcaaca gcaaaggcat ctatactttc cgattcaacg aagaaaccgg agaatcgctc   300
ccactgagtg atgcggaagt agcaaaccct tcatacctca ttccatcagc ggacggaaag   360
tttgtctact ccgtcaatga atttagcaaa gaccaggccg cagtcagcgc ctttgccttc   420
gacaaagaaa aaggaactct acacttattg aatacacaaa aaacaatggg agccgatccg   480
tgctatctga ccaccaacgg aaagaacatc gtcacagcca attatagcgg tggaagtatt   540
accgtctttc ctatcggaca agacggagca ttgctacccg cctcagacgt aatcgaattt   600
aaaggttccg gtccggacaa agaacggcag acgatgcctc acctacactg tgtacgtatt   660
accccccgacg gtaaatattt actggcagac gacttaggta ccgatcagat acataaattc   720
aatatcaacc ctaatgccaa tgccgataac aaagagaaat tcctcacaaa aggtaccccg   780
gaagctttta aagttgctcc cggttccggc ccccggcatc tgatattcaa ttcagacggt   840
aagtttgcct accttattaa tgaaatcgga gggacggtaa tcgcttttcg atatgctgac   900
ggaatgttgg acgaaattca aactgttgcg gctgacactg taaacgcaca gggaagcggt   960
gacatccacc ttagcccgga cggaaaatat ctctatgcca gcaaccgctt gaaagcagac   1020
ggagtagcta tctttaaagt tgatgagacc aacggtaccc taaccaaggt aggttatcag   1080
ttaacgggaa tccatccacg caactttatc atcactccca acggcaaata cttattggta   1140
gcttgccgcg acaccaatgt cattcaaata tttgaaagag atcaggctac cggattatta   1200
actgatatca agaaagatat aaaagtagat aaacctgttt gcctgaaatt tgtagactga   1260

<210> 939
<211> 1797
<212> DNA
<213> B.fragilis

<400> 939
actatgtgtt caaaaataaa acatatatta ctgactgcgt gctgtttcac aggcgcagga   60
ctgatgacaa gttgtaatga cgggtttatg gatcgctttc cggaaacgag tattacagag   120
aaagtctttt tttcttctcc tgctgatttg gagacttata ccaatggcat gtacggctat   180
atcggtgcaa gctattcgga tactccttcc gacaatatgc tttacccaga agataccgat   240
atttataaaa tgatgcgcgg cgaatatcgg cggataaata taggtaaatg gagctggagc   300
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ttattgtata agccgcagga ccctcgagca ttggtggtag actctattat ggcagatctt   540
gactttgccg taactcatat gaaaacgact aaaagcacga ctcgtattta tcgtgatgcg   600
gctttggctg tacaggcacg gattgctttg catgaaggaa cgttccgtaa atatcatccg   660
gaactgaagc tgaatgacgg cgaccgattc ttgaaaatag cggtagaggc atgccagaag   720
attatggaca caaaaagtta cagtttgtct acaaccaaag agagtggttt accggcctat   780
cagtcacttt tttgcagtac ggatcttaca cagaatccgg aaatgattct ggtagctgac   840

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tacgacaagg cgttaggacg tctgcacaat gctcaggctc agtttgacta caacaccggt    900
ctttcccgta gcctgatgga agattatttta gttgttaagg atggacatac cgagtatttt    960
catcaagtgg aaggctataa aacgaagaca gtacttgaag tctttgaaaa cagagatccc   1020
cgcctggaac aaacatttat gaaaccgggt gttttgaatg tgggaaccac tgaacctcat   1080
cgtacgaaat tgaacttggg aggatatcct cagattaagt tccgtccgct gacattcgat   1140
cagattgact ggggaaaatc gtatacagat ttgcctatta tccgttatgc cgaggttttg   1200
ttgatgtatg cagaggcaaa agccgagctg ggtatactca cacaagatga tgtcaaccag   1260
acaattaacc tgatcaggca gcgtgcaggc atgccggatg cttcgttgga tgattggctg   1320
gctaatatcg atccggtaca ggatgaacgt tactccaatg tacagtcagc acagaaaggt   1380
gctgttttgg aagtgcgccg tgaacggaga atcgagttgg catgcgaagg gttcagatat   1440
ggcgatttga tgcgttgggg atgtggaaag ttgtttgaag cagctcccga aggagcttat   1500
attccgggga tgggatacta tgatgtgaca ggtgacggtc aaccggatgt cgctatagta   1560
gaaaagaaag cagatataga taaaattccc gaagaagaca agcaaaagta taaactgaca   1620
gtttatgctt tggaaggtaa taccatcgga cttaccgaag gaacaaaagg ctatatctat   1680
ttggttgccc aacataataa gtatactttt gtatctccaa aatattatta ctatccggta   1740
gctaccaaag atataactgt taacgagaac ctctatcaga atccattctg ggaatag      1797
```

```
<210> 940
<211> 396
<212> DNA
<213> B.fragilis
```

```
<400> 940
tattccgaat cagcgggatc ctgcataatg ccaaccaccg gattctgtcc ggggtcacct     60
tgctccccct tattcccgtt ggtaccgtcg acaccatctt tgccatcggt accatccacg    120
ccatccttac cgtccgtacc attcgtacca tctgcaccat ctttaccatc ggtaccgttc    180
tcaccatctt ttccgtccgt accgtcggta ccgtccacac cgtctttacc atccgtacca    240
tctacgccat ccttaccgtc cgtaccgtct atgccgtctt tcccggcatc tccatccgga    300
ccggtatctc ctttcttccc gttacggata gtaatcggag cacttttgga gaaggagata    360
gtataccccg caccatccgc cagttcctcg atatga                             396
```

```
<210> 941
<211> 204
<212> DNA
<213> B.fragilis
```

```
<400> 941
ggtataggac cttcttattt agtaaactca ttcaaatttg caagtccgaa ctatccgttt     60
ttatacatta gatcaaatat tttttttaaa cctcttagag atttcacctc acaatgccct    120
ccctaccgta tagatacctt ctgttattta agcatattgg aaagttacac ctgctggaat    180
atgttcatac cgaaaaaaat gtaa                                          204
```

```
<210> 942
<211> 891
<212> DNA
<213> B.fragilis
```

```
<400> 942
gatattggta catttttgtt tttttataat atacatcaac ctatgaaaac cttaattgaa     60
aatttgactt ctgatttgct acccaatcag attttttcaaa ccggatttag cttttttaatc    120
atcttaaaag ggaactcctt attgaagttg gatagcaatg ttttgatttt tattatgagt    180
ggtactatga aagtttcctc tgctcagcaa gagttggcta ccgtcagaga gcggcatatc    240
tttttctggg ataaagaaga tgactatacc tgcgagatgc tttcggactc acaggtcatc    300
ttatttgcat ttggtgattt aatagtacat gatttattga cattccgtcc tttcggagcc    360
atttcggata gttctgtttc aaaagatgtg ggacttaaat ttgccgagcc tttgaattct    420
tttttacagc ttcttgcaca gtacatggag atgaatttat atgatctctc cttgtatata    480
gcgaagcagc gggaactgtt ctatatcctg aattctgttt ataatgagca ggaacttgcc    540
attttgttca gttccttgac ggaacagtcg tccaggttta aagaacagat actggagaac    600
tatctcagtg caaaaaatgt gggtgagttg gccagcctgt taggctatgg cgtcactaat    660
```

```
tttcgggcaa agtttaaaga acagttcgga gtgtcggtct accgttggct tctcaatcgg    720
aaatcgcaac atatcattta ccgtattacc gtatatggtg atgagtttag ccagattatc    780
gatgacttcg gattttcatc tccttcacac tttaataaat tttgcaggtc acaatatgga    840
ctgacacctt gcgaacttcg caagaaattg aaaacaaaca ataattctta a             891
```

<210> 943
<211> 993
<212> DNA
<213> B.fragilis

<400> 943
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caggaggtaa cttctgtcat atctccatgt attattttca ataatagaat aggtatgaat    60
aagtttatat atatttttgt tgcaattgtt gcaataagct ttgcttcctg tacgcaagaa    120
cgtgcaaaag agaaagaatt aaaagttttg tcatggaatg tatggcatgc gggacatgct    180
aaaaattatc ctgaaaaagg atgtgaaggt actatcggga ttctgagaaa gagtcaggcc    240
gatgttattt tgatgattga acttatggt gcggctccaa tggttgcaga ctctttggga     300
tatgattatg tattgttatc agacaatctg tgtatttata gccgctatcc gattaaaaaa    360
acatatcttt tccctgactc catttctaca ttcaattttg gaggagtcga aatagacatg    420
gatggcacac cggtccgttt attcgatacc tggttgcatt atttacctga tatgcgcttg    480
gtacctaccg aacaatcgga aacagatatt ctcgcatggg atgatgccgg tacccgggat    540
aatgaaatac gccgcatact ctctgtcttg cagccgatga ttcgtcagac tgacagtatt    600
cccatgatta tgggtggaga tttcaatgtg cattcccatc ttgattggac tgatgcaacg    660
aaagacatgt atcatcatgg tggtgcagtt gtggagtgga ctgtatctaa agagatgcaa    720
aatgcaggtt tcaaagacag cttccgcgaa atacatcccg aaccggaaaa aaatatagga    780
actacatgga tctatgataa tgaagataaa ccactccgat ccgaccgtat tgattttatc    840
tattaccaag gtaagaccat tcgtgcaatt acctccgaat cttataatca ggagttgacc    900
aagcctttga aatttatggg agaggagttc ttttatcctt ccgatcacgg ctttgtgatg    960
actacttta agatatcacc attagaaaaa tag                                  993
```

<210> 944
<211> 1296
<212> DNA
<213> B.fragilis

<400> 944
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tatgacatgg caaaaataca aattaaatct gagaaactca cacctttgg aggaattttt     60
tcaatcatgg agaaatttga ctccatgctt tcacccgtta tcgactcaac actgggtcag    120
agatgcagca gtatcttcgg atatcagttc agcgagatag tccgttcgct gatgagcgtt    180
tatttctgtg gcggctcatg cgtggaagat gtaacgtcac aactgatgcg ccatctctcg    240
tatcatccta cccttcgtac atgcagctct gataccatcc tcagagccat caaggaactg    300
acacaggaaa acatctccta tacttccgac caaggcaaga cctatgattt caatactgca    360
gacaaactca cacattgct tataaacgct ttggtttcta caggcgagtt gaaggaaatt     420
gaggaatacg atgttgactt tgaccatcag ttccttgaaa cggagaagta tgatgcaaaa    480
ccgacctaca aaaagttcct cggctacagg cctggcgtat atgttatcgg tgacaagata    540
gtctatatcg agaacagcga tggtaacacg aatgtgcgtt ttcatcaggc agacacccat    600
aagagattct tcgctcttct ggaatcccag aacatccgtg taaatcgctt cagggcagac    660
tgcggttcct gctcgaagga aatcgtcagt gagatagaga agcattgcaa acatttctac    720
atccgtgcca accgatgcag ttcgctctac aatgacatct ttgctctgag aggatggaag    780
acggaggaga ttaacggcat ccagttcgaa ctcaattcca ttctcgttga gaaatgggaa    840
ggcaagtgct atcgtcttgt catccagaga caaagacgca acagtggcga ccttgacctg    900
tgggaaggcg aatacactta ccgttgtatt ctgaccaacg attacaagtc atcgacaagg    960
gacattgttg aattctacaa tctgcgtggc ggcaaggaac gtatctttga cgacatgaac    1020
aacggattcg gttggagcag gctccccaag tcattcatgg cggagaatac tgtctttctt    1080
ctgcttactg cattgataca caatttctac aagaccatca tgagcaggct tgacaccaag    1140
gcttttgggc tcaagaaaac gagtcgcata aaggctttg tcttcagatt catctccgta     1200
cctgccaagt ggatcatgac tgcaaggcaa tacgtgctga atatctacac agagaaccga    1260
gcttatgcaa aacccttcaa aacagaattc ggataa                             1296
```

<210> 945

<211> 252
<212> DNA
<213> B.fragilis

<400> 945
gttcctgagc aacaaaaagt tgcccaggat tttgccatgt cagaatttttc acttatcttttta   60
gtgttgcaaa aagaaaacaa gcaaaactct aatatgacat ggcaaaaata caaattaaat   120
ctgagaaact cacacctttt ggaggaattt tttcaatcat ggagaaattt gactccatgc   180
tttcacccgt tatcgactca acactgggtc agagatgcag cagtatcttc ggatatcagt   240
tcagcgagat ag   252

<210> 946
<211> 540
<212> DNA
<213> B.fragilis

<400> 946
cgaactatta atgctgtata tatgaaaaaa cattttgtat ggttgctttt attatttccg   60
cttctgctga ccggatgtta tggagaagaa gataaagaga aggaccaggg agattatatt   120
tgggatttca taaactataa tatttatttt tctgtgaagg atgccgccgg caataacttg   180
ctggacccac aggttgcgtc gaatatattg ggtaatgaga ttactgtgga atatggggat   240
aaatcctttc cattggaaaa ttctgtggat acccgcttta atatgccccg cccgttggga   300
ttgagaaaag aagtgctggg ggaagcgaaa gagcgtgtgc tttctttttgg tgagtttttct   360
ccggaacatc aatataaggg agagaccttt acgattcatt ggggagatgg aacgaaagat   420
gtggtaaaat tcgacttata tatcacctgg aagaaacaga accctacaat acataaaagg   480
ctttacttga atgacaaaga atacagtaag gattctttcc tgataaagat cgtgaaatag   540

<210> 947
<211> 279
<212> DNA
<213> B.fragilis

<400> 947
aatctttcta atatttctgc ctttcatttt attaccttac aaaaccaaaa actcttcttt   60
ataatcaaga tatcacccaa tcacaagacg cgtgaattac actatcgcaa aatccacaca   120
ttttttattca gcccatctcc ttcggaccgt aaaaaagagt ttctacacat tttcaaaata   180
caaaatgaca ggattgtaag tgatcatgaa aaaacaagtt gtgataccta ttatgtgcgt   240
tttctcttac catccgggat tctgtaccag tttttttga   279

<210> 948
<211> 2136
<212> DNA
<213> B.fragilis

<400> 948
atcttttaca aagatatgaa taaatttaaa tggagaagct ttttaagctt tttcttaaca   60
gaaagaaaca ttcgtttagt tagactaatg tcttttattt tgtttctatt tgttttttcag   120
ggagtttatg ctcagcaaac ccgcatcaat cttcatgtga aacaagttcc cctaaagcaa   180
gtgcttaaat cgatcgaatc gaagagtgaa tacactttct tctacaatga tgccgaaatt   240
gacatgaacc gtaaagttac ggtacaagcc aataacgaac gtattgatgt gatttttatcc   300
aaaattcttc cggactgcaa atgtgtagtg gagaatagaa agattatttt ggttcccggt   360
gcggagaaac aaaatacccc aaatgataat actgcgaaaa cgaaagagat aaccggtacg   420
gttacagaca cacgaggcga aacgttgata ggtgtaaatg taacggtatt gggaactact   480
accggtgtta tcactaatat cgatgggaaa tattcgttga aggttccggc aggtaagtca   540
cttaagtttt catacgtcgg ctatatcgcc cagactgtaa aggtaggtga taaatcagtg   600
atagacattg tattggagga aaacagtaaa gcgctggatg aagtcgtggt agttggctat   660
gctgttcaga agaaagttaa tctttcgggt tcggtagcaa ctgtttctac caaagcgatc   720
gaggaccgtc cggtattgaa tatgggacaa gcgctgcaag gtgctgttgc caacctcaat   780
gtatcggtcg gtgatggtga agcagatgat tctccttctt ataatattcg tggtaccacc   840

```
tcattgaatg gaggttctcc gttggttgtc atcgacggtg tggtctctac cagtgatcaa    900
ctgaatcgta tgaatcctgt tgatatagca aatatttctg tattgaagga tgctgcgtca    960
tctgctatat atggttcacg tgctgcgttt ggtgtcatcc tggtgacaac taaggatggt   1020
agcaatgaaa aacttaccgt caattataac aacaattttg tattacgtac caatacccgc   1080
atgccggaaa ttataacaga tccttatctg gtggcaacca ctcgaaatac gatggcatat   1140
ccatggtata atctttataa cgaggagcaa ctggcctatg cgaagaaatg ttctgaggat   1200
ccttctactt ctccttattt cttgaatccg gatggatttt atacttactt tggtcgaaca   1260
aactggggttg acgaggctta caacgatgta ggtttttcaa ctatccacaa cattgatatt   1320
tccggaaaaa cagatcgtat ttcctattac ttttcgggag gatacaatcg gcagaacggt   1380
atgtttaagt atggtaatga catttataac cgatataacc tgcgtaccaa attacagttt   1440
aaactgacag actggtggag cttgaacagt aatgtcagcc tgacgacttc cgattatgat   1500
tatgcgaatg ccatgaccaa cacttataaa cagatgtatc gtaagaatcc gatggatatg   1560
gttaagaatc ctgatggaac ttggacagat gccagtgtcg gtacattggg agcattggcc   1620
gaaggtggtc gtgctaccga ctggaaaaca aatacaaata tcaacttgtc gactaagata   1680
gatgtgatca aagatgtctt ttttgtacaa ggaacatttg ccttttcaaa tacaaaaacc   1740
agaagtaatt ggtataattt gcctgtgact taccgtaacg gaccggaatt acctgttttg   1800
acatttaatc cgatttcgac cgtatccgat gcttcaagca gtaactccga tacgaaacat   1860
attctatttg atgtatatgg taccttccaa aaaacatttg cgaagaagca tgctgtcact   1920
gctgttgtgg gtttcaatca ggaagagtat aaatatgatt acgtaaaagc aaatcgtaaa   1980
gaactgattt caagttcact gcctactatt aatctggcta caggtgatat gaatatgtcc   2040
cagagtataa cgacctgggc tctgagaggt gcttttgcgc gtttgggata tatttataac   2100
gacaaatata tttttgaatt caacggacgc ctatga                              2136
```

```
<210> 949
<211> 1536
<212> DNA
<213> B.fragilis


<400> 949
ttatttatga agaaaaattt attgtattta ttcgcactga tctgttcggt gagtttattg     60
gttgcatgta acgatgatga tccagaatat attcaggatg gtgaatttga tggtgtctat    120
ttaggtacct tggatgtaga tgctgcagga gttataaaag ttgatgatat tcctcaaaaa    180
gtttacataa caaaaacagg cgagaatcag tttaagatgg aactgaagaa ctttagtttt    240
caaacaatgg agttaggaaa tatctcagtt gataacatcg cagttattaa aaagggtaat    300
agttgtactt ttagtggtaa agcgaattta actttagcag ttggagcatg cgatgttact    360
gtatcgggta ctattgagga taataaattg gatatggaca ttgcagtggt tgctgctggt    420
acattaaatg ttgcagttga ttttgaggga actaaattag ctgcagataa aagttcagaa    480
gctaagatct taactttttac ttttgcaaat gaatttgtta cttctcaacc tgttattgat    540
tctgaaaata aaacaataac ttttgttgta tcagatcaga tgcctgaaga gcaattgaaa    600
gcgttaattc cagaatttac tatctcggaa ggagcttctg ttgacaagaa gagtggtgta    660
gctcaagatt tctcgcagcc tgtaacatat actgtaacat ctgaggatgg tattgttaaa    720
atggtttata ctgtttctgt ttcaggaaaa gaaaaatatt taagctttaa tgaatgggaa    780
acaattaaat cttccacgag tggttctttg gaacaatatc agaacccgaa aggtacttat    840
ggtacaagta atccggggggt gatgactatt aatgaaatgt ttgggcaagt tggtattcct    900
tcttttgagt attgtgttgc tcctgttgat ggcagggtgg gaaaagctgc tcaattaaaa    960
acattgcata ctgcgattgt cgctaatggg atagattata atgcagcttt tggaggccta   1020
atcccttata ttactgctgg ttctttattt actggtacgt ttaaaacaga tatgtttaat   1080
ccgttgaata gtacaaaatt tggggtacca ttcgttggag aacctgtaac atttacagga   1140
tggtataaat atgctccggg tgagatttat tatgataata ctaataaaat tgtagaggga   1200
cagactgata aatgttctat ttatgcggtt ttatatgaag aatctttgga tagcaaaggt   1260
aataatattc cattgactgg agattataaa aataaagaag tatatatcgg gtcttcaagc   1320
cgagttgtga tgaaagctga attgtctgat gggtcggcaa aagctgaatg gacgcaattc   1380
tctgttcctt ttaaacctgt tggagataat aaatatgatg caaataaaaa gtattatgtt   1440
gctgtgatat gctcatctag cttcgaagga gattactata aaggtgctcc gggaagtact   1500
ttaattgtag atgattttttc tatcctttca aaataa                              1536
```

```
<210> 950
<211> 804
<212> DNA
```

<213> B.fragilis

<400> 950
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ttattgaaga aacaaatgaa aaaatataaa ttctttatag ctatattgac tttctcaatt    60
ctacacagca tctcagtaaa ggcacaagaa gagagaaata aaggtatcat atggtcttct   120
cttagaggat tagaatatga agtaaaagca ggatttagta ttggcggcac ttccccatta   180
ccattgccca aagaaatacg ttctatagat agctacaatc ctaatatggc catagccatt   240
gaagggaatg caaccaagtg gtttggttct gataaaaaat ggggaatgct attagggctc   300
cgtttggaaa ataaaagcat gacaactaaa gctacagtga aaaactataa tatggaaatc   360
atcggggatg gaggggaaaa agttagtggt gtatggactg gaggtgtgaa aacgaaagtc   420
aaaaattcct accttacaat acccattctt gcaaagtata aattaactaa gcgatggaat   480
ctaacagtag gtccttattt ttcatatatg cttgaaggag atttttctgg taatgtatat   540
gaaggttatc tacgtaaaac agatccaacg ggacctaaag tggaattcac agatggtaaa   600
gtcgcaactt acgatttctc caatgacctt cgtaaatttc aatggggtat gcaactagga   660
ggagaatgga aagcttttaa acacttaaat gtatatgcag atctctcatg gggattaaat   720
gacatcttta aaaaagactt caaaacaatt acatttgcta tgtatccaat ctatcttaat   780
ttaggatttg gatatgcatt ttaa                                          804
```

<210> 951
<211> 1248
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (8),(16),(29)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 951
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aaagtctntg agcctntgac cgagtggtnc agttttctga agttgagagg ttcctatggt    60
agtttaggaa accaggatgt ggatgcttat gcatatcttg ccacgatggg atcaggaaaa   120
atcagtcaga tactggataa gcagcaaccg gtatatgtgg gagctcccgg attggttgcc   180
ggtaacttaa cctgggaaaa ggtaactact accaatcttg ccttggatgc caatttctttt  240
gataaccgtt taagcataac aggtgaggta tatgtacgtc gtacaaaaga tatgttaacc   300
cccggagtta cgcttccaag tgttttggga accgacgtgc ccaaacagaa tgcagccgat   360
ttaaagacgg aaggatggga attgactgtg ggttggaaag atcagttcaa gttggccgga   420
aaaccgttct attatgatgt aaacttcaat ctggcggata gccgtgctta tattacaaag   480
tacgaaaatc ccaagggatt gctgggcgat tattatgtag gaaaagagat tggtgagata   540
tggggtgtag aaactttagg gttctttact tccgaagaag acattaagaa tcatgccgat   600
cagtcatggt gtacttctta tccgggtacc cgtcctttgg caccgggtga tctgaagttt   660
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gattataaaa ttataggtaa tagccgtgct cgttatacat ttggtttatc ggccaatgca   780
cagtggaatg gattcgatct cagcttgttt gcccagggag taggtaagaa ggattattat   840
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aaaggtaata tgtatgacca ttggacggag gaaaatccgg atgcgtactt cccccgtatg   960
aaagcttatg tggcggaaaa tacggataga gaatgtggag tggtacagac cagatatttta 1020
cagaatgcag cttatatgcg tctgaaaaac ctcacagtag gttatacact tcctaaggta  1080
ttgttgaata agataggaat tgagcgcttg cgcattttct tctccggtga taatttgtgt  1140
gaattttcgg gtttatacaa gcattacaaa gtagatccgg aaagcttagg tgacattgtc  1200
tatcctcttc agcgttctta ttcattcggt ttaaatgtta cattctaa              1248
```

<210> 952
<211> 606
<212> DNA
<213> B.fragilis

<400> 952
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cattataaag aacagatgga aacagcagaa aacaagtaca tcactgtagc ttacaaactg    60
tatacaacag aagatggtaa aagagactta gtagaagaaa cagcagccga acatcctttc   120
```

```
caattcattt caggtttggg cactacgctc gaagcttttg aatcacagat agtaaacctt      180
cataaaggag acaaatttga atttactatt ccttttgccg aagcttatgg tgaatatgac      240
gaagaacatg taatcgatct tcccaaaaac atctttgaga ttgacggaaa attcgataac      300
gaacatatct atccgggaaa catcattcct ttgatgaact cagaaggcca gcgcctgaat      360
ggtagtgtag ttgaagtaaa agccgatacg gtagtgatgg atatgaacca tccgttggcc      420
ggtgaagatt tgactttcgt gggcgaggtt accgagagcc gtccggctac aaacgaagaa      480
attcaggaaa tgattaaaat gatgaccggc gaaggcggat gcagttgcgg aagctgtggc      540
gacggttgcg gtgacgactg cggagacagt tgtggagaca gctgcggttg tggacattgc      600
cattaa                                                                  606


<210> 953
<211> 1383
<212> DNA
<213> B.fragilis


<400> 953
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tttcctactt ttgtgcaaaa tataaacctt ggacagatga ctgaatcaga aagaaaacag      120
ataatcgctt taatacagcg ggaggtgatt ccggctatcg gatgtacaga gccgattgca      180
gttgcattgt gtgtagcaaa agctacagag actttggggg ccaaaccgga gaaaataaag      240
gtattgttga gtgctaatat cttgaaaaat gcaatgggag taggaatccc cggtacggga      300
atgatcgggc tgcccatcgc tatggctttg ggtgcgttga tcgggaagtc cgattatcag      360
ctcgaggtgc tgaaagacag tactccggaa gctgtagaag agggaaagaa actgattgat      420
gaaaagcgta tctgtatttc gttgaaggaa gacattacgg agaaacttta tatagaagtg      480
acgtgcgaag ccggtggtga acaggcgacg gctatcattt ccggtgggca taccaccttt      540
gtttacgtgg caaagggaga tgaagtactg ttgaataaac agcagacttc cggggaggaa      600
gaggaagaag agactctgga acttacttta cggaaggtgt atgattttgc gttgactgct      660
ccgttggatg aaatccgctt tattcttgag acggcacggc ttaataaaaa agcggcagaa      720
cagtcttttc agggtgatta cggacatgcg ttgggtaaga tgcttcgggg cacttatgaa      780
cataaaatta tggggatag cgttttctca catattcttt cgtatacgtc ggcagcatgt      840
gatgcccgta tggcgggagc catgattcct gttatgagta attcgggcag tggtaaccag      900
gggatttctg cgactttgcc cgtagtggta tatgccgaag aaaacggaaa gtcggaagaa      960
gaattaattc gtgctttgat gatgagtcat ttgactgtga tttatattaa gcagagtctg     1020
ggacgcctat ccgccctctg tggctgtgta gtggcggcaa ccgggtcgag ttgtggcatt     1080
acttggttga tgggaggctc ttataagcag gtggcttttg ccgttcaaaa catgatagcc     1140
aatctgaccg gaatgatttg tgacggagct aaacccagtt gtgctctgaa ggtgacgaca     1200
ggagtgtcga ctgctgtgtt gtcggcggta atggcaatgg agaatcgttg tgttacttcg     1260
gtcgagggaa ttattgacga ggatgtcgat caaagcatcc gaaatctgac gcggattgga     1320
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taa                                                                    1383


<210> 954
<211> 1065
<212> DNA
<213> B.fragilis


<400> 954
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ttagtggtaa ctgtctgttt gttgccgatt ttggcggtaa tatttataat tttaagttac      120
acaattaaat gtatatacaa aatgaaaaag atatctatac tatttatatt ttccttgatt      180
cttggtttat ttgtcagtga agtaagcgcg gccggcccac gtttgaagca acgtcccaag      240
catgtggtat tggttgcttt tgacggattg agtgctgttg ctatccgtaa tcatcccatg      300
cccaatttca atcggttgat gaaagaagga gcttctacat tgaataaccg ttctatcctc      360
ccttcatcga gtgctcctaa ctgggcctcc atgtttaccg gagtaggacc ggaacttcac      420
ggttacacta cttggggaag caaaacaccg gaaattcctc cttttatcac caaccaatat      480
ggccgttttc cgggactgta cggattgttg cgcgatacac atcctaaagc ggaactcggt      540
tatatttacg aatgggatgg catgaagtat ttagtcgatt cgcttgccat caatcatttc      600
gtacatgctc cacagacaaa agatcatccc aagggagcga cacaattcgc cgtcaattat      660
ctgaaagaga aaaagccgat gtattgtgct gttatatttg aatatcctga tcataccgga      720
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catacctata aatgggaatc taaagagtat tatgaaaagt tagatgaatt ggatgggtat    780
ttaggtgaaa tagtagcagc tattgaagaa gccgatatga tggacgaaac agtgattatt    840
ttgaccgcag accatggggg tatcggtacc aatcatggag gaaaaacgct caatgaaatg    900
gagactccac ttgtcttta tggaaagggg gtgaaaaaga attataagat tactgaaagc    960
acgatggtta ttgacgtacc tgccacagaa gcctggttgt tgggtgtaga gcctcacgaa   1020
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<210> 955
<211> 192
<212> DNA
<213> B.fragilis

<400> 955
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acaaggtcta tcttacgtat tttatgttct aaatttaaga ttaagttggt tatcgagcga    120
aatcgtatta aaaaaaaatt aatctatgat tcgaatcgag caaatataat atatctccat    180
catcatcttt aa                                                        192
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<210> 956
<211> 1680
<212> DNA
<213> B.fragilis

<400> 956
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gatctgaccg gtttggacaa tccctggccg gctgtttctg atgaattgaa atctgcacag    120
aacaatgtga agacgattcc gacaatcggt tatcatgccg gatcggcaac tttgtcacgc    180
tggagtcttt ataagcagat acgacaggcg aatgagttca ttgcctatgc ccacgttatt    240
ccgcagaatg gcgatgtggc tgactttatt gatgaaaaag aactggctct tttgaaaaat    300
gaagcacgtt tcttacgtgc ctattatcat tacctgttgt ttgagttata tggcccaatt    360
cctattatga ccgaaattgc tgatccctcg ccgctgatt tggactatta cagaaatttg     420
gtagatgaag tagtcgcttt tatcgataaa gaacttaatg aatgctatga cctacttccg    480
gagaaagaac tgaatccgga tggcaccatc aataatgagc gtgcggcagc gccaaccaaa    540
ggggcggcat tggctatctt ggctaaattg catgtatatg cggcaagtcc gttgttcaat    600
ggtggttatc ccgaagctat tgctttgaag gataatcaag gcaagcaact tttccccggca   660
aaagatgaca cgaaatggaa gactgcattg gatgctttac aacgttttat cgattattca    720
aagggacgct actctttata ccaagtaatg aaaaatggtg aaatcgatcc ggctgagtca    780
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ataccgaata tgtataagaa ccgtgaacct cgttttacc aggatataac ttattccggc    1080
aaagtatggc aaaaaacaga taagaaaatt tattttata aaggaatgcc tgacgataat    1140
tctaaagcag atatgagtta ttcgggatac ttactttata aaggtatgaa ccgtgacttg   1200
ttgaatcagg gaaacaatcc gaaatccaaa tatcgcgcag gtatgttgtt ccgtttggcc   1260
gatttctatt tgttatatgc agaagctttg aatcatgtaa atccgggtga tgcacgcatc   1320
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ccgggaatta tcggtaaccg ggagttgcag gaaaaagcga tccgtcacga gcgtcgtatc   1440
gaattgtttg ccgaaggaca acgctatttt gatgtgcgcc gttggatgtg tgctgaagag   1500
gagggttata aacaaggtgg tccggttcat ggtatggata tgaatgctac cgatcttgaa   1560
ggtttcatga aacgtactgc ttttgaaact cgtatttttg aaaaacgtat gtatctgtat   1620
cccattccgt tggcagagat acaaaagtca aaaaaactgg tacagaatcc cggatggtaa   1680
```

<210> 957
<211> 1137
<212> DNA
<213> B.fragilis

<400> 957

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aaaagagtaa tgaataaagg attttatacta aaagccctgt ttctgttatg ctttcttttc    60
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gtacatatca atgcgcatgg cggaggcatt ttatatgaaa acggaaccta ttattggttt   180
ggcgaacaca aaacagaagg tgaagccgga aatttagcca atgtaggggt gcattgctac   240
tcgtccgatg acttatatca ttggaaagac tgtggtattg cactatcagt gatagaaaat   300
gatcccggac atcccatttc taaagggtgt attctcgaac gtcctaaagt tatatacaac   360
cctctcacta agaaatatgt catgtggttt catcttgaac ccaaaggtgc aggatattcg   420
ggagcactaa gcggaattgc ccttagcgac cgggttacag gcccttacac ctttctaaaa   480
gctgtccgtc ccaatgccgg ttcatggccc atcaacgtac tgcccattca taaaaccacc   540
cgcagacctt ctgcagaaga agaacgtcaa tgcaccggag gtagtcttcc tgcccatccg   600
gacagcctca acatattggg ccgcgacatg gagcagggc aaatggcgcg tgatatgaat   660
ctgtttgtcg atgatgacgg taaagcttac catatctact cctccgaaga gaatagtacg   720
ttgcacattg ccgaactgga tccgacctat acaggctata caggcaaata tatccgggcc   780
tttattaacc ggttcatgga agctccggcc atgttcaaga aagatggtaa ctattacctt   840
attatgtccg gctgtagcgg atggaatccc aatgccgcac gctctgccat agcttcttcc   900
atttggggag aatggaaaga gttaggaaat ccttgtatag gtcaggatgc agaccttact   960
tttcattctc aaagcactta tatcctgccg gtacaaggta agaaaaatca gtttatatac  1020
atgggtgacc gctggactcc acaaaacgct attgacgggc gctacatctg gcttcccatt  1080
cattttgaag gtcccaaacc gattatcgaa tggaaagatt catggacttt agactaa     1137
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<210> 958
<211> 1359
<212> DNA
<213> B.fragilis
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<400> 958
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caaacggaaa cgccggttaa ggtcgataaa cctcttaaat cgtattcaca ttggtatttt   180
ggagcagaat atggtgtccc tttcctgttt ggcgatttta cttcattctc ggcggataaa   240
aactatgtcg gatctcagtt tggagggttt gccggttatc aggttaattc gtggataggc   300
atagaggcat ctgcgcgaac cggatatacc agaatggggg cgaaatctta cgcgggtgat   360
taccttatga atgccgacgg gatgacttat tatacgaatc aggatttta tacctggaag   420
tacaaggatg tgttttcgaa agtacacttt acgaatattg gtttgcagat gaatctgaat   480
gtgaataatt tctttggccc taaccgggga aatcgtcgct ggacggtatt actgagtcct   540
gccgtctatg cacaacattt ctctacagag ttaataaata aggcagataa aagcccatta   600
tcaggaaaaa agacggataa gtggaacatc gggataggg gagatgtgtc tttgcgttat   660
aagatttccc gggctttga tgtacagttg cgtacgggaa ttatatgggt caataacaat   720
aagatggatg gtatatctac gctgattaag tcgaaagacc actttatgac cagtgccgga   780
ctctctttga tatggaaggt gggtaaaaag aaagaagaca atgttctcta tgcctcaaga   840
cgagcggcgg atgtggagat cagatatata gaggagcgtg cggtcagctt gcctacccct   900
gcttgttgcg ttgaagattc gatagagaag gagcggatga acgggagat tgcttcttta   960
aatatgcagt tgcaacaggc gcacacggta gtgaaggaga agaccggttc tgatccgata  1020
ctgggattca acgaattgcc tccggtctat tttaagagag gatcggctta tctgaatgta  1080
gccttgtaca aaaatgaatt atgccgcatc gtgcaaaccc tgaaaaagta tcctgagctg  1140
aaagttattc tttcagggca tgccgaccat accgggaatc cggatattaa tcaaaaaatc  1200
tctttacagc gtgccgaagc actggcagcc tatcttgaaa agaaggggat agatggcaaa  1260
cgtatcgccg tgaaaggaga gtgcatagat atgcttactt ccgatccgaa taattacagc  1320
gtacttgcca ggcgagttat tgttgaaatc caaaaatga                         1359
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<210> 959
<211> 582
<212> DNA
<213> B.fragilis
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<400> 959
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cggcaatatt ataaggtgtt gcgggtatat gcgttccgtt ttgtgaatga ttgggatatt   120
gcagaagacg tagtgcagga tgttttttgtt gctttatgga ataaacgtac agatattgaa   180
```

```
tttgatggcg cggtaaaagc ctatcttttt aaggctgtct ataataaatc gcttaatatc      240
ctttccagta agaaatatac cgaagaagaa tccgtagaac aattttccga tcaaatcgaa      300
gcactgcaaa ttctggagaa taatcaggaa aactcgttgt tcatgaaaga actccagagt      360
gaaattgaaa cttttatcga aacacttcct acgcaggtaa aaaaggtatt tatattaagt      420
agaagctatg gtctgaaaat aaaggaaatc tccgttcagc tcgatctttc tccaaaaacc      480
gtagaaaagt atttgacccg tgctttgttg gaactacgta ctcatcttaa aaacaaggat      540
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<210> 960
<211> 1131
<212> DNA
<213> B.fragilis

<400> 960
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aatccaaaaa tgaaaactat gattagaaag aaaatatatc tgttgttgtt attgatacct      60
ttgctgcatg gctgtaaaga gtccgatttc aacgatttac ttgacagaca gggtgatcag     120
aggaaagaat tgcaagagtt gacagatcta tgtaaaaaac tgaatgagga tatttataat     180
cttcaggtga ttgtcaatac cgacaggata ggagataaca ttactcatat cgaggaactg     240
gcggatggtg cggggtatac tatctccttc tccaaaagtg ctccgattac tatccgtaac     300
gggaagaaag gagataccgg tccggatgga gatgccggga aagacggcat agacggtacg     360
gacggtaagg atggcgtaga tggtacggat ggtaaagacg gtgtggacgg taccgacggt     420
acggacggaa aagatggtga gaacggtacc gatggtaaag atggtgcaga tggtacgaat     480
ggtacggacg gtaaggatgg cgtggatggt accgatggca agatggtgt cgacggtacc       540
aacgggaata agggggagca aggtgacccc ggacagaatc cggtggttgg cattatgcag     600
gatcccgctg attcggaata ttactggact ataaaaatag gttccggtga accttattat     660
ctggccgaca atgatggaaa cagaataaag gcaacctcta cggtacacga tggacaaacc     720
cctcaactgg gagtgaagca atgggaaacg tccgccgggg gcgacgataa ctattactgg     780
acgcaaaaga ttggaaccgg tcccgagaca tggattgaag cggatggaaa gaaaatagtt     840
gccaatgcaa aaaatgctgt gtccgtgttt gagaaggtgg acttgaagga gccggattat     900
gtggaattta ctttaagcgg tggagcaacc cggttcagat acctatagg aagaccggtt        960
attgaggttc cggagggacg taaactgttt tttttcaacc ggggcgggtc tcaggcgatt     1020
gctttcagtt gtaagggtat ctcaaaagag caattgtcgg tagatgttcc gaaggggtgg     1080
agagcgacag tcgattctga agcggtagct agtcttcacc gacggggctg c             1131
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<210> 961
<211> 1137
<212> DNA
<213> B.fragilis

<400> 961
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gcaattgacg catgcaaagg atccgatgat gtcgtcttga cagatattaa tgcagaagca     180
aagagaataa gtatatatgt atacaaaact gctgacatca caaaacaaaa attaaatttt     240
gtattaccac aaggagcaac aataaatccc cctagtggaa tagaaaatga ttttaccacc     300
ccacaaaagt atactgttac atcagaagat gggaaatggt ctgctgtcta tactgtagaa     360
ttcgtaaaat cagaactccc tacaaattat catttcgaaa ctctcacaga atcatctgca     420
aacaaatatg atatatttta cgaatttcag gagggtactt ccacagaacc atctaaaata     480
gtacaatggg ctagtggcaa cattggatac gatttgacag gaatggctaa agaatccaat     540
gattatccaa cagtacaagt aaatgatgga aaaattggga aatgtctgaa attagagaca     600
aaaaacactg gaagttttgg ggcaggagta aatatgccaa tagctgctgg taaccttttt     660
attgggaaat ttgatgtatc taacgcactt gctgatgcac taaaagctac tcaatttggt     720
ttgcctttt ataaagttcc tcaatcctta aaaggatatt ataaattcaa agcaggagat        780
atattcacag aaaatggtaa acctgttgaa ggcaaaaaag accaatgtga catttatgct     840
attttctacg aaacagataa taaccatgaa atgttagatg ctataatgc actgacctct        900
cccaaattga tatctgttgc acgtattgaa gatcctaaag aaacagatca atggaccgaa     960
tttaatttgc ctttcataat gaggccagga aaaactatag atcaggctaa gcttaaagct     1020
ggcaaatata aactaagtat cgtattctcc tctagcattg aaggagatca ttttcgtggt     1080
gcagttggaa gcacccttta tatcgatgaa gtagaactta ttttcaaaga aaactaa       1137
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<210> 962
<211> 1059
<212> DNA
<213> B.fragilis

<400> 962

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gaagttatca tacgttttct ggatggtacg gctaccggtg aagagaaagt ttttctgttc   120
aactggctga aacaatcaga aaagaaccgg aatgaatttt ccgaagtccg tgatttatgg   180
cttttaggca acacgatagc taccgacgat ctggaaacag agatagcgct agagcgattt   240
aaaaatcgga tacagtcaac agaatccggt ttacgtaaaa acagattcgt tttccggaaa   300
cacttcgttc cgttcttgcg tgtggcagct gtctttttga tgttatttac tgtatggtct   360
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ttgactgcca atggaagtaa gggacgattt gttttgccgg atagtacggt tgtatggctt   480
aattccaata gtttattgga gtatcctgaa acgtttagtt cgtcagcccg tgaagtcagt   540
ttatccggtg aagcctattt tgaggtacgg aggaatgaga agcttccttt ccgtgtgcaa   600
gccggagaga tgaaagtaga ggtattgggg actcgtttta ttgttgacaa ctatcgacgg   660
aaatccgggg ttgaagcagt attggtagaa ggtagtgtga agattgccgg ttgtaagatg   720
aatcattcgg tagtgttgac tcccgggcag ttgattaatt atgataagaa gagtgaacgt   780
acgaaagtac aaatggtgaa tacggatgat tatatcagtt ggattcaaaa tgaactgact   840
tttgataatg ataagttggc tgatattatt attaatttaa ataagtggta tggggtggat   900
attgaatgtc cgtcagagtt tgctgaaaaa gtatttatgt cgttctctgt caggaatgga   960
gagaatctgg atgaaattct gaaagcgatg actttggttg ctccaataag atattactgg  1020
gagaatggta tcttacatat tcttcccaga aagcgatag                         1059
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<210> 963
<211> 2475
<212> DNA
<213> B.fragilis

<400> 963

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gtcggtagct ctgtgttcgc acaaatagaa ggaaaagttt atatcgatgc gaacggcaat   120
ggcatttgtg atgcgggaga gaggggggcta aaaggagtct gcgtacaaga tggtctcaat   180
gtggtgaaaa ccacagatga tggtcatttc atacttccgg gacataaaga tacacgtttt   240
gtaactttga ctgttcctga tgggtatcag gcatcaacct cccattacct atcttttgac   300
ggaaccggaa aaaagtatga attgggtatc tgcaagacct cggtaaatac cgggaatgga   360
tattcgtttg tacaaattac agatacggaa acttctctat acggtgattg gatcgataac   420
ttgaaagagt acgtgaaaac caatccgact gcttttatta tccataccgg tgatatttgt   480
tatgaagctc atcaggattt tcatggacat tatcttcgtt ccgtagattt gggaattccg   540
acctactatt gtgtggggaa tcatgatctg cgtgccggaa aatacggtga agagttgtgg   600
caaagtcatt ttggtccttc atggtattcg tttgatgtcg gtaatgtaca ttatgtagta   660
actccgatgc tgggtggtga tcatgcacct tcgtacaggc gttccgacat catccgttgg   720
ctgaagaatg atcttgcaca aacggataaa gggaaaagaa ttgttttatt taatcacgac   780
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gctgattaca atctggatgc catgatttac ggacactggc acaatcatta ttataagcag   900
ttgaagtcag gacttcatac ttactgctca tccactccgg acaaaggagg aatagaccat   960
ggaacttctt gtttcagaat ttacaatgct gataccaaag gtaaattaag ttcagcaact  1020
cgttatactt atatagacgg aatattgact tctgcctatc cggcggaagg tgaaactgtt  1080
tcagttcctg acggaaaaat gacggtccgg atcaatgctt accgtactat atcggatgcg  1140
aagaaggtga cggcttctgt tgaacgaaac ggaaggcttg tatcgactgt gacgcttatg  1200
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cagaatgtcg gcagcaacat ttacatgtgc tcgccgattg ttgcgcagaa caaagtcttt  1500
atcggaacca ttgatgatga caaaagcgaag aaatgctatg taaaagccta tgatgcgacc  1560
acaggacatc tttgctggac ctttgtcact tccaattcga taaagaatac cattgcctat  1620
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gaagatggcc gtatattcgc ttcggatgct tcgggaatgc tttatgccat agatgctgaa      1680
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ttcggacatg acatcagtaa tggtgctttg ttgtggaaga agcgtgatag taaaattcgt      1980
tttcgagacg gatcagctac tttctatgat ggtaatttct atttagcttc atgtgagaat      2040
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gacctgaata cggggggctta tcgcggtaag cgggctttgg gagcacctgt attctcaagc      2400
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<210> 964
<211> 894
<212> DNA
<213> B.fragilis


<400> 964
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gatagacgac agcaacctat tgtgggagca ttggtcaccg ccaaaggaac caatatcagt     180
acaatcaccg atgtagatgg caaattcctc ttgcaggagg ttcctctttc ggtaaagaaa     240
gtagtcgtta catccatcgg gatggagacc cgggaagttg acttgaatgt accggtacag     300
ctgaccggaa aacgtaagaa ggtctcgttt gtggcacatg ccggtcttag tatgagtaaa     360
tatacgatat atggttccga cttttaaagtg ggatatgaat tcggtctggg tatcgaggtg     420
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ttcaatgccg aaagatatgg cgtgaaatat caggagactt ggaatccggt atcactggat     540
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atgggacctg tttttttcgta tggttttgca gggaaagtga aagctagcga gacaggcaaa     660
cccgatgaag agtatgatat ttatagcagt gagtatgaat acgactattc cggtgggaaa     720
cattctttgc tgcatccttt cagctttggt gtagcctatg gcataggggt ggaatacaaa     780
aagtggctgg ccggtatttc aggaaagagc atgtgtctgg ggcaggatga tgaaggcttt     840
gaagcaaaag agcacaatct ggtacttacc ttgggagtca ctaaccgtaa ctga     894


<210> 965
<211> 258
<212> DNA
<213> B.fragilis


<400> 965
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tttctgatag aatgtcacaa gataggtgcg attgcttcgc tgaagtattt ccttgaagga     120
aagctgtgtc tttctgttgt tcctttaagt gcttcggaca cttcacaacc ggaacggaaa     180
acgcaagagt cagggggagaa aaacaggaca atagacctga tggacaaaaa caataggaga     240
tatttgaaaa agaagtaa     258


<210> 966
<211> 1980
<212> DNA
<213> B.fragilis


<400> 966
aacggaactc cgtatccgga acaacctgaa tgcctggctg cgggatacca cggtgcttat      60
catcacccaa cgcatataca ccatgcaatc ggccaaccgg gtcattctgc tggacgacgg     120
ggagatagaa tccatcggca ccccggaaga gttgttggaa cggtcggaaa tgtatcggga     180
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aatatattac tcacagcaaa tcgttatctg accatggcac acggagatca tctgaaatac    240
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gaccggcggt tactgattgt gatcggtgtg ctgatcgtga tcagcattgc ggccaacctc    360
accggatcgt acatgcttcg cccgattatc aacgactaca tcctgccggg cgactttcag    420
ggactggtgc gcatcctgct gttcctggca gctatctacc tgacaggagt ggcggctact    480
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atcagcccga cactgacagc ggtaacgctg attactgtcc ccctgatgtt cctcagtgcc    780
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agcctttaca acagcataca ggctgccata gccggagccg aacgtatctt cgaaatcata   1200
gatgaagcgc ccgagaaagc ggatgttccg gaagccgtca cactgaaaaa tataaaagga   1260
gacgtagccc tgaagaatgt gtatttcggc taccgtccgg agaaaaccat cttgaaagga   1320
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aagacaacga tattaaacct gcttccccgc tttttcgata ttcagtcggg agagatcacc   1440
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gtgttacagg acacccatct cttcacaggt acggtacggg agaacatccg cttcggacgc   1560
ctcagtgcga cggatgacga ggtagtggca gccgcccgcc tgaccgctgc ccattcgttc   1620
atcaaacgct tgccgcaagg gtacgatact ttgctcgaaa acgacggagc caacctgagc   1680
caagggcaac ggcagctatt gaacattgcc cgtgccgcag tggccgatcc ggccatcctg   1740
ttgctggacg aagcaacgag caacatagat acacgcagtg aaatcttgat ccagcggggga   1800
ttggacctgt tgatgcaagg acgcaccagc ctgatcatcg cccaccgcct gtctacgatc   1860
cgcaatgcag ataccatcct ggtactggag cacggagaaa tcatcgagca aggcagtcat   1920
caggaattac ttgcattgaa gggaaaatat tattcgctga atgaagagca attcaaataa   1980
```

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<210> 967
<211> 195
<212> DNA
<213> B.fragilis
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<400> 967
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gaccagtgca accatcggtt aaacgggcgt ccgatgatgg aacagatcgt gaaaatcagt   120
ttcggtgaag caaataggaa aaagacaacg gcaaaacgcc ctatccataa cgtatgttgc   180
tcggcgtatt catag                                                    195
```

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<210> 968
<211> 1725
<212> DNA
<213> B.fragilis
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<400> 968
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ctggtactcg tgtcggtgat gtgcgaaacc gttcagccga tgtacatggc ggatattata   120
gacaacggag tgatgcaaag agacctctcc gtcatcactg ccgtgggcgg aaagatgata   180
ctgatctcca ttgtcggact gattttcagc attgccaatg tctacgtatc ttcccatgca   240
tccattggtt tcggaaccga tctgcgcacc ggcctttttcg gcaagataca gcaactctct   300
ttcttcgaca tcgaccggtt cagtacggct tcgcttatta cccgcctgac cagtgacatc   360
agccgcatcc agcaagtcat catgatgtcg atgcgcctga tgctgcgctc ccgctgatg   420
cttgtcatgg cggtgttttt cgttgtacgc atcaatctcg aactggcggg tgtcctgctg   480
gctgccatcc ctatattggg tttcagcgta ttctttattc tccggaaagg tttcccctttc   540
ttcctgaagg ttcagcagaa ggtggatcaa ctgaatgagg tagtacgcga aaacctgatt   600
aacatccggg tggtaaagtc atttgtacga gaggacttcg aagcacataa gttcaaagac   660
```

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aagagcgaaa gcctgcgtga tacggtgatt catgcttcca acatcattgt ctccatcttt    720
ccggtaatgc aactggtgat gaacctgtct atcatcgcta tcctctggat gggaggccac    780
aaggtgatga ccggagagct gaaggtaggc gaactgatat cgtttgtcaa ctacctggga    840
caggtgttga tgtcattaat gatgctttcc atgatcatca tgtcttatgc ccgtgcttct    900
gcctcgtcga aacgtatttt agaggtactg gacacacaac cttcgctgac cgacacaccc    960
gaaggcatgc agagcacccg agagattgaa aaaggagaga tcgccttcga gaaggtcagc   1020
ttccgttatg gcggcggaga gacggacgta ttacgaaaca tcagtttcca catccgcccg   1080
ggcgagacag tggccatagc aggtgctacc ggatcggcaa aaagttcact cgtgcaactg   1140
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gactataacc tgcgcgaact ccatgcccgc atcggaatgg tgctgcaaaa gaacgaactc   1260
tttacgggaa ccatcgccga aaaccttcgc tggggaaaac cggacgccac gcaagaagaa   1320
ctcgaagtgg cagcccgtgc cgccgaagcc catgagttca tctgctcgtt gcctgccgga   1380
tacgacacac tgctgggacg gggtggaatc aacctttccg gcggacagaa gcaacgcatc   1440
tgcatcgcca gggccttgct cgtaaaccc aagatattga tactggacga cagtaccagt   1500
gccgtagact ctgaaacgga actccgtatc cggaacaacc tgaatgcctg gctgcgggat   1560
accacggtgc ttatcatcac ccaacgcata tacaccatgc aatcggccaa ccgggtcatt   1620
ctgctggacg acggggagat agaatccatc ggcaccccgg aagagttgtt ggaacggtcg   1680
gaaatgtatc gggaaatata ttactcacag caaatcgtta tctga               1725
```

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<210> 969
<211> 1266
<212> DNA
<213> B.fragilis

<400> 969
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gactggctgg ccggtgtcct cactaagaac aagattgatg tactgattgt tgccggagat    180
gtctttgatg tttccaatcc gtctgctgct tcccagcgga tgttctatcg tttcattcac    240
agggtgacga ctgagaatcc gcgattgcag ttggttgttg tggccggcaa tcacgattcg    300
gctgccggc tggaatctcc tctgcctttg ttgcaggaga tgcgtacgga gattaaagga    360
attgtccgta aacagaatgg caaaatagat tatgagcatt tactggtaga attgaagaat    420
gcggcggggg aggtagaagc cctatgcctg gcggtacctt tcttgcgaca gggagactat    480
ccggtggtag agactgaagg caatccgtat gcggaagggg tgaaggaact gtatgcccgt    540
ttgttgaaat atgcgttgaa gaagcggact gacggacagg cattggtggc tgtcggacac    600
ctgctggcaa ccggttcgga gattgccgag aaagatcata gtgagcgcat catcatcggt    660
ggtctggaga gtgtatcgcc cgagtctttt cccgaacaga ttgtttatac ggctttaggg    720
catatccaca aggctcagcg cgtatcgggc agggagaata tccgttatgc cggcagtccc    780
ttacctatgt cgtttgccga gaagcattat caccacggag tggtaaaagt gaccctggat    840
gaaggttggg cggttgagat agagaaactt gaatatactc cgttagtgcg tttgctaagt    900
atccctgcca cagaagctgc ggctccggac gaggtgctgg atgaattgcg cgggctggaa    960
ctaccggaag atgaaccgat gccctatctg gaagtcaagg tgaaactaag cgaaccggag   1020
ccgatgttgc ggcagcaagt ggaagaaata ctggaaggca agccggtccg gctggcccgt   1080
atcgtttctt tctatcggca ggcggcagag gggagcgtgg aagaagaaac cctgaccgcc   1140
ggattgcagg agatgaatcc cttacagatt gtgaaagcaa cctttgagaa tagttaccag   1200
gcggagatgc cggaagaact ggtaaatttg ttccaggagg cttgccggac catcaattta   1260
gaatga                                                         1266
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<210> 970
<211> 1143
<212> DNA
<213> B.fragilis

<400> 970
acaaagatga acaagagaaa attactaggc ttgctctgtc tgatgacatt gctggctacc     60
tcctgtgata ataaaggaga ttattggggg gctatggaat cttctaaagc aacattaacg    120
ttggagcgga tttgtgatat ggctacgctt tcacaagatt ccgtggaatt gctgtccaat    180
attctgggga tgaatacaga agaactgtat cggacagacg tggtcatgat agggaaagtg    240
acaagtgaag aaaccggatt ctaccagtat cccagatttc tgatagctaa agatcgagag    300
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atgaaagaag tgcttacgga agcttatgta catcgtgata cagaagggac ttttttatgct    360
ttcctggaat cgaatatgct ccccgtgggc gaaacttatt attgcgccat ggttgattat    420
aattatggct ataacggacg tccgggattg ctggaccatg tattgggcgg aaatacgcgt    480
ggcgaacgtt acagtgaagt gaagccattc cgcctttcag ggttgccaag attggttgtg    540
cacgatgcac attttacagg atacagtttc tatttatctg cggaggtccg tttcaaaagc    600
aatggcggaa ttatagaaca gggcgcttgt tacagttcta ctaaaagaat ccctacggtt    660
gatgatcaga agacattggc acgggaaacc cggaattatg actattcgtt tttagaagta    720
gaggtgaccg atctgcttcc caatacacat tattatatac gtccctatgt gactactgag    780
gaagggacag gctacggacc ggtagttgag tttacaaccg aaccgggtac ggaaccgatt    840
attgattatt tcacgatgta tatagatacc gataggtcgg taaacctgta tgccactttc    900
tatatagata attatcagat tacgcactac ggatacagct atggcattta ttctccagaa    960
acgggaacgg tgacggatga acagaagata gaggttcctc ttgaggataa tcacggacaa   1020
cagcttagta aagtcattac cggattgcgt ccgggaatac tttatgcttt ccgtgtttat   1080
gcggaaaatg gagtaggggt tacttacagt ggttaccaga ccgttaagat tcccgtagaa   1140
taa                                                                 1143


<210> 971
<211> 2991
<212> DNA
<213> B.fragilis


<400> 971
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gcttccattg aaggaacttt tgaaattgat ttccaagccg agcctttacg ctctgccggg    120
attttttgcaa tatccggacc tacaggagcc ggaaaatcta cgatactgga tgcgctctgt    180
ctggcgctgt atgataagac accccgcttc tccgcttcgg tcgagagtct ttatatgtca    240
gatatcggtg agagtcgggt gaatcaggcc gatgtgaaga atatccttcg cagagggacg    300
ggagagggat ttgccgaagt tgattttta ggagcatccg gacactgtta tcgttctcgt    360
tggtcggtac gccggacagg aagccgggct aacggtgctt tgcggtcgca gacgatacaa    420
gtgaccgatc tgactgccaa tcaggaacta cagggaacga ggaaagagtt gttggcacaa    480
ttggtgactt tggtcggttt gacttacgaa cagtttaccc gtacggtgct gcttgcccag    540
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ctgaccggaa cggagatata ctcccgtatt tccagtgaaa tctatctgcg tagcaaaaca    660
gccgatgcag aactgaatca gctgaagagc aatgccactc tgatcgaact gctttccgaa    720
gaggaaatca ctcttctacg gaccgaaaaa gagagtctga ccaaccttcg tgaacaggga    780
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caggagcagc gtgataagaa agtgcaggat atgcggctgg atgaagaaaa aagtaagaag    900
ctccgggaag aatatacacg ccagtccgac tctctcattc gcttcagggg acagtgtgaa    960
gctgtgcaac ccgatcttag ccgggcacgt gaactggatg ttcagatcca atcactggtc   1020
agccaatcta agcaggtaga ggagatactg caaggtgctg aaaaggcagc gaatgcacaa   1080
gccaataaat tgcaatctgt gcagggagcc ctgcatactt cctgccattc gttgaagaat   1140
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cggaacaggc tgaaagagca ggaagaccaa cttgccattc ttcaggaaaa gaacgaagcg   1260
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gagcagaaac gtccttcgtc tgaagaggag caaaatccgg actattttga aaacaattg   1860
cataccgtgc aagggaagct aaatctgctc gcggagaaaa tgcaccaata ccatcagctc   1920
tacaaggaat ggcaacagca tgaggggcag atcaggacgg ttcgctcggc ttgtgaggct   1980
ttgcgcgaag gggtggcccg ttgccatctg ttgatgcagc aagttctggc tgctaaagag   2040
caatttgaac tactgaaaac ggcggaaacg actgctcggg agcagttccg agtggtcagt   2100
gaacagttga taactctccg tcaggaacgg gctcctttgt tgaaaggcaa atctgttgag   2160
gatgcggaag ccgctattcg gaaaaaagag aaacaattaa acgattccgt ggaacaggtg   2220
```

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cgcaaggagg gagaagaagt ccagtcgcgt atttccggta tgcagggaga gattaggcaa    2280
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cggaagatcg gagtcatttc ccatgtacag gagatgagtg agcgcatcgc cgtgcaagtg    2940
caactccatc gtgcggcgaa tgggaagagt gctatcactt tgacaaattg a             2991
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<210> 972
<211> 297
<212> DNA
<213> B.fragilis

<400> 972

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cgtgtgaacg atttcaatat tcaacagaat atgatcacca gtgccgaaga agcactagac    60
ctctctatcc tggcttataa cgagactcgt cagcggttta tcatcgggaa agcagatatc    120
aacagtctga cgctgtctct gaaccgtcag caagaggcac aacagaatta catttcagcc    180
ttgcaaaact attggctgaa ctattataag atacgtaaac tgacgttaca tgactttgct    240
accggaatct cgctgactga caagtttgac tatgcgggag gacaattggt gcgatag       297
```

<210> 973
<211> 1092
<212> DNA
<213> B.fragilis

<400> 973

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agaaaaagtt taataaccat tatgaaaacc cagtatccct cttatacgct ttgtctggca    60
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gaaccgtgtt tgcccgacac gaaaaacgag gtgtctgtca tgacgctcaa aaagcagata    180
ttcaatcatg aattggtgag taatggaaaa atttctgccc ggggaatggc tgacctgaga    240
tttgaaagtg gtgaagtgat agcccatatt tgggtaaaga acggagaccg ggtacgaaag    300
gggcagaagt tggcggagtt ggacaaattc aaacttgaca accagttgtc gcaatcggaa    360
gacgctttaa aaaagtcgga attggaattg agggatgtac ttatcagtca gggctatccg    420
gcagacgaca ttagtcaggt acccgaagag acaatgaagt tggcaaaggt gaagagtggt    480
tatgatcaga gcaaatcaca atatgaaatg tcgaaataca atgcagagca cgctactttg    540
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acttcggatg tattctgtac ggtgatcgat atgcagggta tggaagtaga ttttactgta    660
cttgaaagtg agttgccatt aataaagaac ggagataagg tagtgatcaa gccctattcg    720
gatgccgcaa cagtacacga aggaagtatt tcggaaatca acccctttggt agatgataaa    780
ggaatggtga aggtgaaagc ccgggtgaac ggggccggta agctgtttag cgggatgaat    840
gtacgtgtca gtgtacatcg ttcgttggga gagcagttgg tgattccgaa aagcgcagtc    900
gtacttcgtt cgggcaagca ggttgtattt accctgaaag atgggaagat ggcccaatgg    960
aactatattc ataccgcttt ggaaaatgca gacagttata gtgtggccga cggactgaca    1020
gaaggagata cggtcatcgt aagcggaaac attaacctgg cacacgaagc tccggtcaca    1080
atcattgaat aa                                                        1092
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<210> 974
<211> 588
<212> DNA
<213> B.fragilis

<400> 974

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gatatggaac tggatgactt gaagaaatcg tggaatgctc tggatgaaca cctgaaaaac    60
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aaggagttca ttgaagaaaa agagatagca caactgctgg gacgtgcccg taacaagatg      120
aacagcatcg accggttcaa caggaaactg cgttttgcct cgatcggcat actgacatta      180
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tcactgtgca tcccggctct ttgctgggat ttgtactccg cccattacct gagccggacc      300
cggatcgatg agatgcctct ggtcacagtc atctcccgca tcaatcggta ccatagatgg      360
atggttcgcg aatggatcat aggtatcctc tatctgcttg cgatggctac tttttttcttt     420
ttccacaggc aagtctggca atatggtgct gcgggaatta tcgtcagcct gatcgtctgg      480
gccatcgggc tcggaatctg cctatgggta tatcgccgga acataagaca tataaaagaa      540
ataaagaaga acctcaacga gttaaaagaa ttaaatcata cagcttaa                   588


<210> 975
<211> 1038
<212> DNA
<213> B.fragilis


<400> 975
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agtacatcaa tcttgttctt agtgaggaca ccggccagcc agtccagaaa atgttcgtgt      120
tcctgcgtgc ggtcataccc gaaaaaggtt tgtcccaaat gccaatcggc tgtatgtagt      180
atacgtatca tgctattgaa atttgaaaca aagttagcaa ttattcagga cagcaatatt      240
attttgttta ttttttgcaca agctaaaacc aaaatcatta tgaagatact atactatatt     300
tatcaaatct gcattgcatt gcccattttg ttagtattga ctatcctcac ggcggttgtc      360
acaatcgttg gttcattgct gggaggagcc cacatctggg gatattatcc ggggaaaata      420
tggtcacaac tgatctgcct tttttctgttg atcccggtca aagtgcatgg gcgcgaaaag      480
ctacatgaaa gaacttctta catctttgtc cccaatcatc agggctcatt cgatatcttt      540
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<210> 976
<211> 1173
<212> DNA
<213> B.fragilis


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<210> 977
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<212> DNA
<213> B.fragilis

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<210> 978
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<212> DNA
<213> B.fragilis

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<210> 979
<211> 1653
<212> DNA
<213> B.fragilis

<400> 979

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tggtttattt atagaaataa agaaaaacga tag                                 1653
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<210> 980

<211> 459
<212> DNA
<213> B.fragilis

<400> 980
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tgcggtgacc ggtggtcgaa aagaaattct cgtgtatggg gaagcggagt gatatttaat   180
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agtgcctgga gaagcatcat tcctcccgg ctggtggtgt tcggatggtt tatcatccta    420
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<210> 981
<211> 1461
<212> DNA
<213> B.fragilis

<400> 981
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<210> 982
<211> 1293
<212> DNA
<213> B.fragilis

<400> 982
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```

```
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gaagtgatca tgacgtgtga acgatttcaa tattcaacag aatatgatca ccagtgccga     1260
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```

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<210> 983
<211> 486
<212> DNA
<213> B.fragilis
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<400> 983
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gaactgcaat tgtgtttgca agacgaacct cgagcattgg aattttttcaa ttcactggct      360
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<210> 984
<211> 1170
<212> DNA
<213> B.fragilis
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aacctgggtg atacggatat ggtaactttt atgtggtgta acgagtgttt tgatcccggt     1140
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<210> 985
<211> 201
<212> DNA
<213> B.fragilis

<400> 985
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cagtctagtt ggaagaactg a                                                201
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<210> 986
<211> 1899
<212> DNA
<213> B.fragilis

<400> 986
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gtttctgaag aaattacaga aactccggct gaagaaacta ttgtggaaaa accgacagaa     180
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aaagaaaaaa gaagtgcctt ggcagctgag attgaaaagc aaaaggaaga aaatctacaa     480
gttaaactat cgattatcga gagttgaaaa gagttagtgg aatcacccga tgacgccaac     540
aaatcctaca cgaatttaa aaagctacag cagcagtgga acgaagtgaa attggtgcca      600
caagctaaag tgaacgagtt atggaagaac taccagttgc atgttgaaaa gttctatgat     660
atattaaaac tgaataatga attcagagaa tacgacttca gaaaaaacct ggagattaaa     720
acacatctct gtgaagctgc cgaaaagttg gccgatgaac aagatgtagt ctccgctttc     780
catcaattac agaaactaca tcaggagttc cgtgacaccg tcctgtcgc caaagaatta      840
cgtgacgaaa tatggaatcg ctttaaagcc gcttctacag ccgtcaaccg tcgccatcag     900
cagcatttcg aagctctaaa agagaccgaa caacataatt ggatcagaa aacagttatc      960
tgtgaaatag tagaagctat tgagtttgac caattgaaaa catttgcggc atgggaaacc    1020
aagacacaag aggtgatcgc cctgcaaaac aaatggaaaa caattggttt tgctccgcag    1080
aaaatgaacg tgaaaatctt tgagcgtttc cgtaaagctt gtgacgaatt ctttaaaaag    1140
aaaggagaat cttcaagtt gctgaaagaa ggtatgaatg ctaatctgga aaagaaaaag     1200
gcattgtgcg aaaaagcaga atctctgaaa gatagtacag aatggaaaga aacggctgaa    1260
atcttaacca agctccaaaa ggaatggaaa acaattggcc ctgtttctaa aaaatactcg    1320
gacgctgttt ggaaacgttt cattactgca tgtgattatt ctttgagca aaaaggcaag     1380
gccacttctt ctcaacgttc tgtagaacaa gagaatctag aaaagaagaa ggcaatcatt    1440
gcccgcttaa ctgctattga cgaaacgacg gatgccgatg aagcaagcaa agaggttcgt    1500
gaattgatga agaatggaa tggtatcgga catgtaccgt ttaaagagaa agacaggctt     1560
tataaacaat atcacggttt gattgaccaa ctttcgatc gatttaatat cagtgcatcg     1620
aacaaaaaac tgagtaattt caagtcttct atcggcaata ttcaaagtgg aggctcccag    1680
tcactctacc gtgaacgtga gaaattagtc cgtacatacg aaaacatgaa aaatgaactc    1740
caaacttatg aaaataattt gggcttcctg actacctctt ctaagaaagg aaatagtctt    1800
ttgacagaaa tcaaccgcaa ggtggaaaaa ttaaaatccg acttagaatt agtattgcag    1860
aaaataaaag taatcgatga atcaatcaaa gaagaataa                           1899
```

<210> 987
<211> 342
<212> DNA
<213> B.fragilis

<400> 987
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ggagggacat ctatgagaca aggagtcgta tacttgaata aagaacgggt aggcattatt      60
acggaattat cttctaacga atataaattt cgctatgatg acgaatattt caatgatcca     120
tcaaagccct ccataagcct gacattgaca aaacaacaac aggaatatac ttcccattat     180
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```
ctatttcctt tttttgccaa catgctgtca gaagggcaca accgcatcgt tcaggcaaga      240
ttattgcaga ttgatgaaaa agatgatttt ggtattttat tagctacagc acataccgac      300
acggctgggg ctgtaaccat aaaacctctc gactatgatt ga                         342


<210> 988
<211> 1032
<212> DNA
<213> B.fragilis

<400> 988
agtattatgt cactttttaa agataaatct ctcttgatta ccggtggaac aggctctttc       60
ggcaatgcgg ttttacgtcg ttttcttgat tctgatatca gggagattcg tatattctct      120
cgtgatgaaa agaaacaaga tgatatgcgt cactatcttc agaacccaaa agtaaaattc      180
tacattggcg atgtccgtga caagcgctct gtggatggag ttatgaatgg agtggattat      240
atcttccatg ccgctgcgct gaagcaagtc ccttcctgtg agttttttcc cacacaagcg      300
gttaggacaa atgttctcgg tacagaaaat gtgttggatt ccgccatagc tcacggtgtt      360
aaaaatgtgg tggtactttc taccgataaa gctgcctatc ctataaatgc aatgggtatc      420
agcaaagcca tgatggagaa agttgctatc gccaaaggtc gtcagttggg taattgtgga      480
ggaacaacga tttgctgtac ccgttatggg aatgttatgg ccagtcgtgg ttctgtgata      540
cctttgtggg tagagcaaat taagaaatgt aatccaataa caataacaga tcccaacatg      600
acccgcttca tgatgacttt ggatgatgct gtcgacttgg tgatttatgc cttttcagcat      660
ggaaaaaatg gtgatttgtt tgttcagaag gcgcccgctg ctactctgga tgtattagcc      720
gatgcattaa agtctcttta ccatagtaac gcggatgtca aagtgattgg tacccgtcac      780
ggtgagaaac tctatgaaac tcttgttacc cgtgaagaga tgtctaaagc agaggatatg      840
ggtgattatt atcgtatccc atgtgatacg cgtgatttaa attatgataa gttttttgtg      900
gaaggaagtg aggaggtctc caaaatagaa gattaccatt ctcataatac ccgtcgtctt      960
gatgttgagg ggatgaaaga acttctcttg aaacttgatt ttattcgcga agatcttggc     1020
cttgaaaaat ag                                                          1032


<210> 989
<211> 1245
<212> DNA
<213> B.fragilis

<400> 989
acaaaatcgt ctggagaaaa tcctgataat atcgaaatga atattttgtt tctgaccctt       60
aaccgtgttt cagatctttc tgaacggggg atatacacgg atttgatgcg ggaatttatt      120
tgtcatgggc atagggtcta tatggttgtt cccgccgaac gtcgctttca tgaatctact      180
tcaataaaag agagttgtgg cgctcaaatg ttgagggtga agacattgaa tatccaaaag      240
agcaatgtgg tggagaaagg catcggtaca ttgttattgg aaatgcagta tcaatgtgcc      300
ataaagagat attggaagga tatccggttt gatttgatac tttattcaac tcctcccatt      360
actttcaata gggtcatcag ttcacaaaag agacgttgta aggcgaaaag ttatctttta      420
ttgaaagata tttttcctca aaatgccgtt gatttgggaa tgttttcaaa gagaagctta      480
atttatagac ttttccgtaa aaaagagaag gatttatatc agatatcgga cttttataggc      540
tgtatgtctc ctgccaatgt ggattatgtg ttgacacata tccggaaat aaaggctgat      600
agagtagaga tatgccccaa tagtattaaa ttgttagaga gtcattaat ggcttcaact      660
gtaagaaaaa acatattgca gaaattgcat attccaatta ataagactct ttttatatat      720
ggtggcaatt tggggcgtcc acaaggtttg attttcttgt tggacgtgat agccgcaaat      780
gaggaacgta atgacagtta tttcatcatt gtaggcagtg gcactgaata tggcaagata      840
aagtcttggt ttgaggcgaa tcatccggat aattcaatgc tgctttcttc acttccaaag      900
aaagagtatg atgatttggt aaaggcttgt gatgtcggtt tgattttcct tgatagacgt      960
tttaccatcc ctaattaccc ttcccgttta ctctcttatt tagaaaaccg gatgcccgtt     1020
ttattggcta cagacctgaa tacggatatc ggacggattg ctgaacggaa tggttatggc     1080
ttttggacag aaaatgggaa tttggataca tttatggaaa tggtggattc cttatctgca     1140
gacagagaaa aaataaaagt gatgggcgag aaagggtatg aatacttgaa gtctaattat     1200
acagtagaaa gagggtaccg gatgataatg aaacattttg agtag                     1245


<210> 990
<211> 183
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<212> DNA
<213> B.fragilis

<400> 990
ctgcatctgt tagaactcca acagttacag aacctagttt ggaagcctct cttattatat   60
ttaaatgacc tggatgaatc atatccgcac tcattccaac ataaactttt ttacattttt   120
ccatcttaca tagaatttat tagaaaaaac aaacaggaag tgttagttat aacaatttat   180
taa   183

<210> 991
<211> 489
<212> DNA
<213> B.fragilis

<400> 991
agaatttccc ccctcagctc cccccaaagg ggaggaagaa gagcggaagg gggattctgc   60
ttatctcccg ataccgggat acgccttcaa tacaatgacg cacaattact cgggactgat   120
ggacacgcta aagagattga gcattaccga caccggggaa gtaaactcca tactcaggct   180
gtcggactat gggaggaagg gaacgacggt atggaaactg attgccaaca cttgctggag   240
cgacatcgga gccaaaggaa gatacctgat agcggcgcta aacaagacga aaagaaggta   300
gcagagagtg tcagtcccct atttgtagtt gacaaaaaag caaatataca ggcttttgac   360
cagaaaggga ttcagcgaaa caaagaagta aaaagtgtgc ttaacgaact aaaacacagt   420
gttttaaag cacaagattt ctctcgccca aagctttgtt ttaacgctac gttaaagctt   480
gttctttaa   489

<210> 992
<211> 186
<212> DNA
<213> B.fragilis

<400> 992
gaatgcctac cgaaagatag gaatcttttc tcatttggta atggagtaaa tattgtttct   60
ttaattgatt cggtaaaaat gatttttcga ctaaatcttg tacttgttct gccttttggc   120
aaaagcttat tagctctttta tgaactcttt tgggggggaat gccgatgcgg ataccaaatt   180
ctatga   186

<210> 993
<211> 297
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (56)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 993
aaagcagcta cggcaaccgc atcattgcca ctgaatggga tacacacaag aagctntcgt   60
tcctggtata catttatatt aaaaggaata gataatgtag ggctgctgaa tgaaatcaca   120
caagttattt cacgccagct taatgtgaat atccggaaac tggatatgga aacggacgat   180
ggcattttcg aaggaaaggt cgggttgtat gtgcacgatg tggaagatgt aaaagctatt   240
tgcaacaacc tgcgcaagat tccgaatata aagtcggtga cacgtgtaga aaactaa   297

<210> 994
<211> 1164
<212> DNA
<213> B.fragilis

<400> 994

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aattctaaca ccatgctgaa atcaaaatat aaaatctatc tgttactact ctgcctgaca    60
ggttgtgttt cagaatacaa cgcacaacta ccttcttccg atgaagaatt gctggtagta   120
accggcgaca ttatcgctaa tacagaagcc atattctcat taagcaaaag tattccacta   180
tccgaagaca tgccggaaga ttatcgaaac atttatgcca gaattgctgt agtaggcagc   240
gacggctatc gaagtgattt cggaacggct cttggtgatg gtaaatacca ggtcagtatc   300
ggtgaattgc aggatgatgt atcctacgga atagagatag aatacgacgg agagatttat   360
acctcgtctc cttccacacc gatggtatct tctgaaatag acagtgtttc gtggatacaa   420
ccagaacctg aacaagcact ttctatacgg gtatcgaccc atggtgatcc cggaaaaact   480
caatactaca tgtggaacta tcgggaagac tgggagataa gagccagcta cattacaact   540
tgctactttg atccggatat gaaccgcatc tatgaagaca gcaattatcc aactttctat   600
tgttggaaaa aggaaatatc aagaaatata ttgattggct ctacggaaaa gttgaaagaa   660
catctgatca taaataataa gctactcgat gtgccggtca atgaagacag attcactgta   720
ctatacagca tacaggtaca gcaacgggca ttgagtaaag agggatatga atattacttg   780
aatgtacagc aacagaatga agaaatggga ggaatcttta ctccacaacc ctctgaaatc   840
caaggaaaca ttagttgtat cagtcagcct ggacgaagga cgatcggtta tgtaggcgtc   900
tataaaaaca tctctgaaaa gagaatatac attcatccca acgaaattaa acgtcctcct   960
ctatacagtg gctgtgaaga agtgtcggat agcgaaatgg atgaacaggg ctatagcaca  1020
tatctgataa gataccttgt cggttatcgt ccagtcggta caggcactca cattgaccac  1080
tgggccctac ggagatgtac agaatgtgaa gccaacggag gaagtaaaaa caagccttca  1140
ttctggccca acgatcatca ataa                                         1164
```

```
<210> 995
<211> 366
<212> DNA
<213> B.fragilis

<400> 995
ttgagaaaca ctctacaaac aaaaagaaat ctctgtcatt ctaaaatcaa aagtacaaat    60
agccgtaatc aaattcacaa tatattggga atttccttgc ttatcaaaca aatacttagt   120
atttttgttt caaattcaca atatatattggg aatatgaaac aaattggaat acagattcgc   180
caacgaagaa aaatgttggg tataaatcag caaacacttg ccgatttagc acaaatcagt   240
atcaatacta taacaaaaat tgaaaatgga gaaataaata ttaattttca aaagctctat   300
gccatattgg aggtattagg attagaactt tctctgaaaa ttaaaaataa ggagggacat   360
ctatga                                                             366
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<210> 996
<211> 2046
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (1088),(1885),(2007)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 996
attatggaca ctgagaacca gaaagaaata gctgaagagc agatgattga acaagcgttt    60
caggaattgc tgaacgatta tcttgctacc aagcaccgca acgtattga gattataacc    120
aaggccttca atttcgccaa tcaggcacat aaaggcatca acgacgctc gggggaaccg     180
tatatcatgc accccattgc cgtcgcgaag atcgtatgca atgaaatagg ccttggctcg    240
acttccattt gtgccgcttt gctgcacgat gttgtcgagg acaccgatta tacagtagaa   300
gatatcgaaa atatcttcgg ggccaagatt gcacagattg tcgacggact gaccaaaatc   360
tccggaggta ttttggtga ccgggcttcg gcacaagcag aaaacttcaa gaaactcctg     420
ctcaccatgt ctgatgatat ccgggtgatc ctgatcaaga ttgccgaccg cctgcacaac   480
atgcgtacac tcggttccat gttgcccaac aagcaatata agattgcagg cgaaaccctt   540
tatatttacg ccccctcttgc caatcgcctg ggactgtata agatcaagac ggaactggaa   600
aacctcagtt tcaaatatga acatcctgaa gaatatcagg agattgaaga aaagctgaac   660
gcaacagccg ccgaacgcga taaggtattc aacgaattca ccgctcccat acgcgagcag   720
ttggataaaa tgggattaaa atatcgaatc ctggcacgtg tgaagtccat ctactctatc   780
```

```
tggaacaaga tgcagaccaa gcatgttcct ttcgaagaga tttatgatct tctggctgta      840
cggatcattt tcgaaccacg caacatagat gaggaactga acgactgttt cgatatttat      900
gtttccatct ccaaaatcta taaaccgcat cccgaccgtc tgcgcgactg ggtgagccac      960
cccaaagcta acggatacca ggcactgcat gtcactttga tgggcaataa tggccagtgg     1020
atcgaagtcc agatacgcag tgagcggatg aacgatgtag ccgaacaggg atttgccgcc     1080
cactgganat ataaagaaag aggaggcagc gaagacgaaa gcgaactgga gaaatggttg     1140
cgtaccatta aagagatact cgacgatccg cagccggatg ccatcgactt tctcgataca     1200
atcaaattaa acttattcgc ctcggagatc tttgtcttca ccccgaaagg agagctcaaa     1260
accatgccgc agaactccac tgccctggat ttcgccttct cactgcacac ggatatagga     1320
agccactgta taggtgccaa agtgaatcat aaactggtgc ctctaagcca taagctgcaa     1380
agtggtgacc aagtggaaat cctgacatcc aagtcacagc gtgtacagcc gcaatgggaa     1440
gtgtttgcca ctactgcgcg tgcaagggct aagattgcgg ctattctgcg taaggaacga     1500
aaaaccttcc agaaagaagg agaagaattg ttgaatgaat tctttaagaa agaagagatc     1560
cgcccggagg cagccgtcat cgagaagttg tgcaaactgc ataacatgaa gaacgaagaa     1620
gagtttcttg tagccatcgg taacaaaacc atcgttctgg gagatgccga caaaaatgaa     1680
ctgaaagaga aacaaagcag caactggatg aagtatctga ctttctcttt tggcaataat     1740
aaggataaac agcaggagga aaaagaaccg caggaaaagg aaaaaatcaa caccaaacaa     1800
attctcaaac tgacggaaga tgccctgcaa aagaaatata tcatggccga atgttgtcat     1860
cccatccccg gtgacgacgt actgngatac atggacgaga atgaccgcat catcatccac     1920
aagcgtcaat gtccggtagc ggccaaactg aaaaagcagct acggcaaccg catcattgcc     1980
actgaatggg atacacacaa gaagctntcg ttcctggtat acatttatat taaaaggaat     2040
agataa                                                                 2046
```

<210> 997
<211> 888
<212> DNA
<213> B.fragilis

<400> 997
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tctaaaaaaa caaatatggc aatagcatac gacgggatca attattttcc ggtgggcgta       60
aacttcatgg aagagaacgc aatggaagtg atagaagcaa aatatggaat aaaagggtcg      120
gcaattgtgc tgaaactgat gtgtaagatt tacaaggagg gatactacat acgatgggat      180
gaagaacaat gcctgatttt cgcaaacaaa gcaggaagag aggtgcaggc agaagaggtg      240
cagggggatca tcgagattct gttcaccaaa ggaatactgg acagaaacag ttatcaggaa      300
aacggaatac tgacttcgga aagtatacag aaagtatgga tggaagcgac aaagcgaagg      360
aaaagagagt tgtcggagct cccttacctg atggtgaaac cggaaaaaga aaatggaaaa      420
gccgacactc ccccggcact acaagaaatt cagcaaccag agctgttcaa aaaggaaaaa      480
acacctgtta acccgaaaaa tgtagtacat catgtagccg ttgacgcaaa aaatgcatgc      540
aattccggac aaagtaaagt aaaagaaaag aaagcagagg aaaataaaga atttcccccc      600
tcagctcccc ccaaagggga ggaagaagag cggaaggggg attctgctta tctcccgata      660
ccgggatacg ccttcaatac aatgacgcac aattactcgg gactgatgga cacgctaaag      720
agattgagca ttaccgacac cggggaagta aactccatac tcaggctgtc ggactatggg      780
aggaagggaa cgacggtatg gaaactgatt gccaacactt gctggagcga catcggagcc      840
aaaggaagat acctgatagc ggcgctaaac aagacgaaaa gaaggtag                   888
```

<210> 998
<211> 366
<212> DNA
<213> B.fragilis

<400> 998
```
actacgaaaa caaacaacaa gaagaaaaaa aaagaattca aaaaaaacaa aacgggcaac       60
aagcaaatct ctgacaatag agaccttaag tcaaacagag gacgaaaaaa ggagaaaccc      120
atacaaggga ttgttttgaa acactacgaa tgcttaaagc tactaatcac actctatcaa      180
gatggggcaa tgggtataaa aaaggagaca tcacaagttg cattagcacg atatatagac      240
gacaaaaaac tattagggaa tattcgaaat ggaatattca ttccattgaa gttcagcact      300
attctaaagg aaacaaacac catctggaac gaaatgctac gagataaatc cattggcata      360
aaatag                                                                 366
```

<210> 999
<211> 360
<212> DNA
<213> B.fragilis

<400> 999
atgaacgaaa cgaaagtatt aatagaaaag ataaccgaag gtatacaaga aaaaaaaggt   60
aaaaacattg tcatagcaga cctgacaaac atagacgaca cgatatgcaa atactttgta   120
atctgtcagg ggaactctcc cagccaggtc attgccattg tagattccat aaaagaattt   180
acccgcaaag gtgccggcac caaaccctct gccatcgacg gacagcgaaa tgcagaatgg   240
gtagctatgg acttttcaga tgtattagta catgtattcc taccggaagc cagaaacttt   300
tataatttgg agcacctgtg ggcagatgcc aagttaacta caattcccga cattgattaa   360

<210> 1000
<211> 225
<212> DNA
<213> B.fragilis

<400> 1000
aacctctcga ctatgattga attaacttgc tgtccttcta ctttacaaaa gggattctca   60
acctattcgc ctgttgcatt gaaagagctg ttcaatagcc aaaaggtaaa ccatatactg   120
ccatacaatg gcatggacaa taatgaaacg gaacaaaaag aatttcagga taacaacaaa   180
cacatgtcta tatccggagc tcaacaaaat aagtccagcc aatga   225

<210> 1001
<211> 1104
<212> DNA
<213> B.fragilis

<400> 1001
ttaatatctg ccatggaaca tcctgagaat aacgaagcgt ataaaggttt ggttgtgaat   60
gcaggcattg aacaaccgtc atctgtaaat ccttatctga acggaaggt aaagaagcgt   120
caattgtcgg ttagtgagtt tgtggaggga attgtcaagg gagatgtgac gatcttgagt   180
caggctgtga ctttggtaga aagtgtgcgt cctgaacatc aagctactgc ccaggaagtt   240
attgaaaaat gtctgcctta ttccggaaat tcaatccgtg taggtatcag tggtgtaccg   300
ggagccggta aaagcacctc gattgatgtc tttggattgc acgttctcga aaagggaggt   360
aagttagctg ttttagccat cgacccgagc agtgaacgca gcaaaggaag tattttgggt   420
gataaaaccc gtatggagca gctttcagtg catcctaaat catttatacg tcctagccct   480
tccgccggtt ctttgggggg agtagcccgt aaaacccgtg aaacaatcat tctgtgtgaa   540
gcggccggct tcgataagat atttgtagag acggtgggag tgggacagag tgaaacggct   600
gttcactcga tggtcgattt ctttctgttg attcagttgg ccggtacggg agacgaactt   660
caaggtatta aacgcggtat catggaaatg gcagatggta ttgtgattaa taaggctgat   720
ggtagcaata tcgataaagc caaattggcc gctgctcagt ccgtaatgc tttgcatctt   780
tttcccgctc ccgattccgg atggacaccg cgtgtactca catattccgg attctacaat   840
cttggggtaa aggaaatatg ggatatggt tatgagtata tcgatttttgt gaaaggtaat   900
ggctattttg aatatcgccg taacgaacaa agtaaatact ggatgtatga aagcatcaat   960
gaacagttac gtgacagttt ctatcataat gccaagatcg aatcgatgtt acaagaaaag 1020
gagcaacaag tgctcagggg aaatctgacc tcttttgttg ctgccaagag cctactcgat 1080
acctatttttg aagatctgaa ataa   1104

<210> 1002
<211> 1206
<212> DNA
<213> B.fragilis

<400> 1002
ttattgtatg ccaatcaaag aaattttaga attaatacct ggtacaaaag cattaaaaag   60
atgatttcac caaaattttt tattgatagc ctttcagata ggcaaattga ttttttttca   120
ggtgttccgg attctttatt aaaaaacata tgtgcttata ttgcggataa caaggatgca   180

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aagcataata ttataacagc aaatgagggg gcggcagtcg gtttggctgt aggtcattat    240
ttggctacaa gggaaattcc agttgtgtat atgcaaaact caggagaggg aaatattatc    300
aatcctcttg cgtcattgac tgataaagaa gtctataata tacctattct tttactgatt    360
ggatggcgtg gtgagccagg agttcatgac gaaccgcagc atgttaagca gggaaaagtg    420
actattcctt tactggatgt aatggggatt aagaatacag tgatgagtaa gagtgaagtt    480
gatttcacta agcaattaga tgatgcgttg gtctatatgc gtgaaactaa cgaagcattt    540
gctttaataa tagaaaaaga tacattcgaa tcatattcgc ttaaattaaa ggaggattct    600
gtattacaac aattatcaat gagtcgagaa aacgctattc aaatggttgt agattcaatt    660
ggaaaaaagg atgtaatagt ttcaacaaca ggtatgattt cgcgagagct ttttgaatac    720
agaacaaaaa tgaatgaaag ccatcagagt gattttctta cagttggttc tatgggacat    780
gcttcacaaa tagcattagg gattgcactg gaaatacccg atcgtaaaat ttattgtttt    840
gatggtgacg gtgctgtgat tatgcatatg ggatcaatgg caattattgg agataagggc    900
cctgaaaatt tgatccatgt tgtgtttaac aatggatctc acgattctgt aggtggtcag    960
ccaactgtag gacttaagat taatatccct gcaatagcaa gagctgtcgg ttataaagtt   1020
gtatatagtg ttgattgtga agaagcttta aagactgctt tagaaaaggt cataaaagaa   1080
gcaggaccta ttcttctaga ggttaaggtt aaaaaaggga atcgaaaaga tttgggaagg   1140
ccatctatta ctccaataca aaataaatta tcttttatga cttttttgaa taatgaaaaa   1200
aaatag                                                              1206
```

<210> 1003
<211> 1260
<212> DNA
<213> B.fragilis

<400> 1003

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aagagttttt atatggaaca gataaccgaa aaaataaatg acttattcgt ttcctgggga     60
tttgactcca gtgaagtagg tcccattatg acactggtac tgattattgg cattgccttt    120
ttagccgatc ttatttgtcg taacattctt ttaagagtag ttgccaaact agtgaaaaag    180
accaaagcaa cctgggatga tattgtgttc gaccgtaaag ttttgattta cctcagtcac    240
cttgtccccc ccatcattat ttatgtgttg attcctttgg caattccgaa tgtaagtgcc    300
ctcgatttta tccgtcgtat ctgcatgatt tatatcattg cggttttttct gcgtttttatc    360
agtgcatttc tgtcggctgt ttatcatgta tacagtgagc gagaacagtt tcgtgatcga    420
ccattgaaag gtttgttgca aacggcacaa gtgatactat ttttcattgg aggaattgtt    480
gttatcagtg tattgataga taaatctccg atggtattgc tcaccgggct tggtgcttcg    540
gctgccatcc tgatgttggt gtttaaagac agtatcatgg gatttgtgtc cggcattcaa    600
ctttctgcaa ataatatgct gaaagtaggt gactggattg ctatgcccaa atacggagcc    660
gacggtacgg tgattgaagt gacgctcaat acggtgaagg tgcgcaattg ggacaatacc    720
atcactacca tccctcccta tctgctggtc agcgattctt ttcagaattg gcggggtatg    780
caagagtccg gtggacggcg tgtgaagcgt tctatcaata tcgatatgaa cagtgtaaga    840
ttctgtaccc ccgaaatgtt ggctaaatat aagaaaatcc aattgttgac cgattatgtg    900
gagcagaccg agcaggtggt gaaagagtat aataaagaac atcacataga caactctatt    960
ttggtcaatg ggcgacgcca gaccaatctc ggagtattcc gtgcctatct gaccaactac   1020
ttgaaaagtc ttcccgatgt caataagaac ctcacttgta tggtacggta tcttcagccc   1080
accgaacaag gtattccggt cgaacttttac ttttttttctg ctgtgaaaga gtgggtacct   1140
tacgaaggaa ttcaggccga tgtattcgat catctgcttg ccattgttcc ggaatttggt   1200
ttgcgcgtat tccagaatcc tacgggagaa gattttcggg agtggaatag aagaaattaa   1260
```

<210> 1004
<211> 840
<212> DNA
<213> B.fragilis

<400> 1004

```
gcaaagtttc tattttttag taggcgctct gaggatttat cacttatttc gctgccaata     60
aatttagata atatgggaaa aataattgct ttggccaatc aaaaaggtgg tgtaggaaaa    120
acaacgacta cgattaacct cgcagcttcg ctggctacgc tcgaaaagaa agtactggtt    180
gttgatgcag acccacaggc aaatgcctct ccggattggg agtcgacat caagcaatct    240
gaatgtacta tctacgaatg cattatcgac agagccaacg tacaggacgc tattcatgac    300
accgaaattg attcgttgaa agtcatttca tcgcacatta atctcgtagg cgccgaaata    360
```

```
gaaatgctaa atctcaaaaa ccgtgaaaag atactgaaag aagtgctgac tccgttaaag    420
gaagagtatg attatatttt gatagactgc tctccttcgc tgggactgat cacaatcaat    480
gccctcacgg cagccgattc ggtgattatc cccgtacaag cggaatattt tgcccttgag    540
ggaatcagca aactgctgaa taccatcaag atcatcaaat cgaaactgaa cccggcactc    600
gaaatagaag gtttctgct gaccatgtac gactcacgtc tgcgtcaagc caaccaaatc    660
tatgatgaag tgaaacgcca cttccaggaa ctggtgttca aaaccgtcat ccagcgtaac    720
gtaaaactga gtgaagcccc cagctacggt ctccccacca tcttatatga tgcagagtcc    780
accggagcga aaatcatttt ggcgctggct aaagaactaa taagcagaaa cagtaaataa    840
```

```
<210> 1005
<211> 615
<212> DNA
<213> B.fragilis
```

```
<400> 1005
gtaggtatgt atcagtatgt tattaaacga ttaatcgatt ttgtagtcgt gtttttgtc    60
ctgattatta tctggcctgt attgcttctc gtaactcttt ggcttcattt tgccaataaa    120
ggtgccggta ctttttttct tcaggaaaga cccggtagac atggtaaaat ctttaaggtc    180
atcaaattta aaaccatgac agatgaacgt gatgcagaag gaacttact tccggatgat    240
aaacgattga cgaaggttgg taagtttgtt cgttctactt cgattgacga actcccacaa    300
ttaatcaata ttctgaaagg agatatgtcc tttattggtc cccgtccgtt attacctcaa    360
tatcttcctt tatacaataa agaacaggct cgtcggcatg aagtccgtcc cgggataacc    420
ggttgggctc aggtgaatgg acgaaatgcc atttcgtggg taaggaagtt tgagttggat    480
gtctggtatg tagaccattg ttcttttttt ctggatttga agatcttttt tttgactata    540
aaaaaagttt ttgtgcgaga gggtatcagt tctgatactt cagtaacaat ggaacctttt    600
acagggaata attaa    615
```

```
<210> 1006
<211> 1068
<212> DNA
<213> B.fragilis
```

```
<400> 1006
agtagtatgc agattttttg tacacttttt aatgttgctt atttagataa ggctatcaca    60
atgtataatt ctcttgagag agtctctagt gaattactc tatatgcttt ggccatggat    120
gataggtgct atgaaatttt agttgatcta aattttagga acttgaaacc gattaagcta    180
tcagactttg aagatgatga tttgcttaaa gtaaagtcag atagaacctt tggtgaatat    240
tgttggactt gttcatcttc tttgatatct tacgttctgc atgaatattg tgagccacat    300
tgtacgtaca ttgatgcgga tatctacttt ttttcggatc ctatagtttt gatgaacgaa    360
atgcttcata agaatgcttc tgtattaata gtaggtcatc gtttttaatga ctataataga    420
gatttaatgt gtcggactgt tgggaaatac tgtgttcaat ataatacttt tttgaatgat    480
gaaaatggta atatattgct tgaaatatgg cgtcgacaat gtataacgca ttgttcttgt    540
gatggtgatg gtgtctattg gggggatcaa aaatatatgg ataattggac tactgactat    600
gattttgtac atgaaactct taatgtaggt gctggaatag ctccttggaa catctctcaa    660
tataaattgc gtttaataaa tgactcaggc tgtgttattg taagtaggaa taaagttgat    720
tgctctacag tattttatca ttttgaaaat attaattaca taaatgataa gattgtgaaa    780
attaatgtgt tcaatacatg gcatatagat aaggaactag tgaaggcttt ttatattcca    840
tatttgactg aggtttatga cattaaacta atgctaaagg aaagatatgc tgtgaatatt    900
ttgcttaaaa aacatcctgg tgttaaatgt gataaaagaa ctttttgtcca aaagattatt    960
gataggttaa gttatcttat tgataaggaa aaacaaaaac tctatataat gtcagttctt    1020
ccaactagac tgtataagaa aaatgatgta ataattatta ttggataa    1068
```

```
<210> 1007
<211> 1527
<212> DNA
<213> B.fragilis
```

```
<400> 1007
cttatagtta atgagatgag cgacaataag cgtattgcag ttaatacatt gattatttat    60
```

```
gctcgaatgg ctgttacgac aataatcagc ctaatagcta caagatatgt cttacttgaa    120
ttaggacaag ctgattatgg attatataat gttgttgggg gcatagtgac gatgctcaat    180
gtggtaagta taggaatgta tatgaccacg cagcgtttta ttaatgtaga aatgggtaaa    240
ggacctaatg gaaatttaaa taaagtattc aatgtttgta tagttctgca tataggattt    300
gctttatcta tttttatcat aggtctgact gttggtttat ggtatatttta taacatttttg    360
aacgtattgc cagaaaaact ttccgatgca gttttgatat attttatatc tactacagtt    420
tctgctatcg gtattattaa tattccattt caaggattga tgttagcatt tgagaaattt    480
aaaaagatgg caataattga tttgctatct aatttcatga aagtgccttt agttatttta    540
cttatgtgtt ggtctggtaa taaacttctt ttttatgcga ttggtgtttg ttttatttct    600
cttttctctt ttcttttcta ttatagttat tgctatcgaa agtttgggga tattgtgaaa    660
tggcatctgt cacgtgaaaa atatatttat aaggaaattt tagtttttcaa taattacact    720
tcgattggaa ctattgcata cctttctcgt actcaaggtg cttctgtggt tataaattac    780
ttttttggaa ttattgtgaa tggagctttt gctatagtat tccaaatcga aaatttcatt    840
atgatgtttg ttaataatct tgggactgct tcagatccac aaataactca atcctatgcc    900
tctggtaatt atagagatgc attttctctt gttgagaaaa tttctaaata tagtatgttc    960
ataatgcttc ttgtaacatt ttcaattggt gttgagctgg aatttctttt aagattatgg   1020
ctcggtacat tgccggaggg tatttttagta ctttctcgct ggatgttagt aagtctttta   1080
gtgcggagta taaatagctc atgtggctct attattcaag cctctggtca tgtgaaatgg   1140
tttcaaataa taagttctgt attattattg cttggattac caatatcttg gcttttatat   1200
aaatggggga tgccccccgt aactattata attacttta cagtaaccga ttttattagc   1260
agaatgatat atttatggtt aatgcatcga attatcaaat ttgatgtttt gcatttttca   1320
aaaaaagttt ttttacccgt aattaaggtt ctgtgtctat caggcttata tctgtatctc   1380
tacaattcca ttatgctaca aactgatttt atgcgtgtta tgggggattgg cgtgtcatgt   1440
atgtttttatg tgtgtctatg tctattcgtt gggatgaatc gtttggaacg aatagtatt   1500
ttttttttata ttaagaataa aatatga                                      1527
```

```
<210> 1008
<211> 1038
<212> DNA
<213> B.fragilis

<400> 1008
catttaacta aaacacgacc tatggcaatc agtctcaaag acaatctgac ttcttcctat     60
ttcaatgctg ctcataagtt atactctaaa aaggcgcgcc gccggattgt agcttatgtt    120
gagagttatg acgatgtagc tttctggcgt acactgcttg aggagtttga ggacgaagaa    180
cattattttc aggtgatgct tccttcggct acatctttgg ctaaaggcaa gaaaatggta    240
ctgatgaata cccttaatac ggccgagtta ggcaaaagtc tgattgcctg tgtggatagc    300
gattatgact ttttgttgca aggagctact gctacttcac gtaaaattaa tcgtaataga    360
tatattttc agacctatgc ttatgctatt gaaaactatc attgttatgc cgatagcttg    420
catgaggtct gtgtgcaagc cactttgaac gacagacacc tgattgactt caatgagttt    480
atgaaacgat actctcagat tgcttatccg cttttcctgt ggtctgtctg gttttatcgt    540
cgtcatgata cttatacgtt tactatgagt gaatttaatg cctgtgttcg tttgcacgat    600
gtcagcttga ggcatccgga acgttctttg gaggcagtga ggcgttcggt aacgtctaaa    660
ctttctgagt tatccacgcg ttttccacaa ggtatcgaag aggtcgacaa gttatcggtc    720
gaattaaaag gacttggagt gcttcctgat acaacatatc tgtttattca ggggcatcac    780
atcatggaca atgtcgtgat gaaagtattg actcccgttt gtacagccct gcgacgcgaa    840
cgggaacaag aaatcaaaaa attggcggaa catgacgaac aatttcataa tgaactgact    900
tgttatcaaa acagtcaggt caatgtggag gtaatgcttc gcaaaaatag tgcttacaaa    960
gatttatacc tttatcaatg gttgaaagaa gacataaaag agtttttata tggaacagat   1020
aaccgaaaaa ataaatga                                                  1038
```

```
<210> 1009
<211> 765
<212> DNA
<213> B.fragilis

<400> 1009
tcacaaacta aggcgcaaca ttttatgaaa aaccgacatt acttaaggca catactggcc     60
attactgcgt tattattcaa tggagaagcc atttactcgc aaacttatcc aatagaaaac    120
```

```
tacttaaaag cagcaggaga ctatgttact atttacaatg gtgaaatcga attaacatac      180
agtcttgccc aatacgacaa tcttccctat tttcaaggtg atgaatttac cacaggagag      240
attatcttca aaggaaaccg atacccggga ctggatcttc atttggattt acacaaagac      300
caactttgtg cactgactcc tgacagccat tacagcatga ttatcaataa tgaaggaatc      360
gaacaagtca acctgcacaa tactacattt atctatttcc gtccgacaaa gaagacagat      420
ctcaataagg gattttacga attactacaa gacggaaagc gactgagact gctggcacga      480
aaaacatact ccgttgctca gatcaacgta gaaaaaatag ccaaaacccg caaacatcaa      540
actgaatact tcatatacgg agtaaaaat tatctggaat acaatgggat atattatccc      600
gtcagtaaca acaagtcgtt tgccaagatc tttccggagc aacataaact gataaaacgt      660
tacgcacgaa aacataaact taattttcgc catgacgctg atgcctcatt aatcgctctt      720
actaactttt gtgaagaatt gatagaccaa aaacaaacac gatga                     765
```

<210> 1010
<211> 360
<212> DNA
<213> B.fragilis

<400> 1010
```
aatcattata atatgaagaa gttgaaaagc ccggcgtcac aaagtgaagc catgaaactg       60
agatggaaaa aacggatcgt cttcgagaaa ggatacaccg agtcgtgcgc cgaatggatg      120
gcagaacgac ttgaagcact cctggaccat atgcaatatg gacatgcgac ggtagcttac      180
cgaaaacaaa acgggagttt ccaactggta aaagcaacat tgatttacta cgaagcggag      240
ttccgtaaga agtatgatcc cacaaaaata gaaggcgcag tagtctactg gaatgtggac      300
gaacagagat ggacgacgtt tcaagtggag aattttatgg agtggagacc ggtggtatag      360
```

<210> 1011
<211> 1002
<212> DNA
<213> B.fragilis

<400> 1011
```
atgaagaata aagaattagg gatgaagaaa ctaataaaaa aggcgctgaa acttatctta       60
ccattggttt tgggaggctt tatcttatat tgggtctatc gtgacttcga ttttgtgaag      120
gctatggaag ttttgcaaca tggcacaaac tggtggtgga tggctttctc gcttcttttc      180
ggcatatttg cacaggtatt tcgtggttgg cgttggcgcc agacgctgga gcctttggga      240
gcatttcccc gaagaaggga ttgtgttgat gccattttca tttcgtatgc agctagtttg      300
gttgtaccga gggtaggtga ggtgagtcgt tgcggggtac ttgctaagta tgacaacgtt      360
tcttttgcta aatctttagg gactgtggtt accgaacgtc tggtagatac tgtgactatt      420
cttttgatta ccggtgttac ggttctattg caaatgcctg tgtttgttac cttccttgag      480
caaaccggaa cgaaaatccc ctcattcatg catttactta cttctgtctg gttttacatt      540
gtttatttt gtacaatcgg agttattgta cttctctact atctgattcg tacgctttct      600
ttctttgaga aagtgaaagg agttgtgctt aatgtttgtg aaggaattat gtcactgcgt      660
aatgtgaaga atcttccgct ttttctactc tatagttttt tgatatggct tagctatttc      720
ctgcattttt atttcacttt ttattgtttt gcttttacgg cacatttggg cttacttgct      780
gcattggtta tgtttgttgg aggtaccttt gctgtaattg tgcctactcc gaatggagcc      840
ggtccatggc attttgccgt tattaccatg atgatgcttt acggggtaaa tgcgacggat      900
gcagggattt ttgcactaat tgttcatggc atccagactc tgctggttat tttattgggt      960
gtttatggat tggtgactat ttcttttta caccggaagt ga                        1002
```

<210> 1012
<211> 1335
<212> DNA
<213> B.fragilis

<400> 1012
```
attctatgta agatggaaaa atgtaaaaaa gtttatgttg gaatgagtgc ggatatgatt       60
catccaggtc atttaaatat aataagagag gcttccaaac taggttctgt aactgttgga      120
gttctaacag atgcagctat tgcaagttat aagcgccttc cttatttaga ttatgaacag      180
cgtgcggaga tagttaaaag tatcaaaggt gtagattctg ttataccctca agagactttta     240
```

```
gactatgttc caaatcttga aaaactacgt ccggattatg ttgttcatgg tgacgattgg      300
attgatggtg ttcaatctaa tactcgtaaa cgtgtaatta agtgtttgtt agagtggggg      360
gggaaagtgg ttgatattgc atatactaaa ggttttttctt ctactgcaat gaatgagagg     420
ataaaagaaa taggtacaac tccggaaatc aggcagaaaa gacttcgcag gctaataaac      480
gcaaaaccta ttgttcgtat tcttgaatca cataacgggt tgactggact cattgcagaa      540
aatgcttcgg taataattaa cggagtgaag catgaatttg atggtatgtg gtcctcttct      600
ctaacagact caactagcaa aggaaaaccg gatatagaag ctgttgattt aacaactcgt      660
ttacatgatt taaatgatac tttagaatgt acaacaaaac cagtaatttt tgatggtgac      720
acaggtggaa aggttgagca ttttgtattt acggttagaa cgcttgagag cttggtatt       780
tccgccatta tcattgagga taagatcggt ttaaaacaaa actctctatt tggtactgat      840
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gcacaagtaa cagactcttt tatgattatt gctcgtatcg aaagtcttat tgctggtaaa      960
tcaatggagg atgctttgga aagggctgct gcctatgtta aggcaggggc tgatggagtt     1020
atgattcata gtaaagacaa gtctgggatg gacataaaga attttttgtac atgtttcaga    1080
aaaatcgact cgacgacacc aatagttgct gtaccaacca cttataatca gtttactgaa     1140
tcagaattgg cttcatgggg tataaatgtt gttatttatg ccaatcacat gcttagaagt     1200
gcttatcctg caatgctgga ttgtgcaaaa tcaattttga ctcatgaacg ttcgttagaa     1260
gcatccaatg attattgtat gccaatcaaa gaaatttttag aattaatacc tggtacaaaa    1320
gcattaaaaa gatga                                                      1335
```

<210> 1013
<211> 1152
<212> DNA
<213> B.fragilis

<400> 1013
```
actgaaatcc tgggaattat gaaatattat ctgattgttg gcgaggcttc gggcgatttg       60
catgcttccc acttgatggc tgcactgaaa gaggaagacc cggaagctga atttcgcttc      120
tttggcggtg atttgatggc tgccgtggga ggaacaatgg tgaagcatta taaagagttg      180
gcctacatgg ggtttatccc tgtgctgcta catttgacga ccatttttgc caacatgaag      240
agatgcaagg aggacatcgt ggcgtggtcg cccgatgtgg tcattctggt ggattatccg      300
ggctttaatc tcgatattgc taagtttgtg catgcgaaaa caaagatacc ggtttattat      360
tatatctctc ccaagatttg ggcatggaaa gagtatcgga tcaagaatat aaaaagagat      420
gtggacgagc ttttttccat acttcctttt gaggtaggat ttttcaaggg acatcgatat      480
cccattcatt atgtgggaaa tccgacggta gatgaggtga ccgccttcaa ggcgtcgcat      540
caggagtcct ttgccgattt tattgccgat agtgaattgg cagataaacc tatcatagct      600
ttgcttgcag gtagcagaaa acaggagatt aaggataatc tgcccgatat gatccgggct      660
gcttcagctt ttcccggtta tcagcttgtg ctggcagctg ctccgggcat ttctccggaa      720
tactatgcca aatttgtaaa aggaacggaa ctggcggtga ttttttgaccg gacttatcgt     780
ttgctccaac aggcggatgt tgccttggtt acttccggta cggctactct cgagacagct      840
cttttccgtg ttcctcaggt ggtttgttat catactccgg tgggcaaatt ggtgtctttt      900
ctccgaaggc atattttgaa ggtgaagttt atctcgttgg tcaatctgat tgccggacgt      960
gaagttgtca gggagttggt ggccgatacg atgacggtag agaatatgcg ggccgaattg     1020
gagtgtttgc tgtttcggga ggattatcgt cgcaaaatgt tggacggtta cgaagagatg     1080
gcacggttac tcggaccggc cggagccccc cggcatgcag ctcgtgaaat ggtgaaattg     1140
cttaaaaaat ag                                                         1152
```

<210> 1014
<211> 855
<212> DNA
<213> B.fragilis

<400> 1014
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aaacgtaaca acaccttgaa gaacaacttt ttacaacgcg ccataacagg aatattattc       60
gtagccatca tagtgggttg tatactttat gatccactgg cttttcggcac tcttttttgtc    120
attgtcagcg ctctgactat acgcgaattc ggacatctcg tcaaccaatc gggagaggta      180
agcatcaacc ggactatcac catgttggga ggagcttatc tgtttctggc cattatgggt      240
ttctgtatcg acgctgccgg ttctaaaata tttattcctt acctgatatt aatcatttat      300
ctgatggtaa gcgagttata tctcaaaaag aagaatccgg tttttaaactg ggcttactcc     360
```

```
atgctgagcc agatgtacat cgcgcttccc tttgccatgc tgaatgtgct tgctttccag    420
aatgatccgg aagcaagcag cgtatcatac aatccgatat tgcctctatc catctttgtc    480
tttttatggc tgaatgatac gggggcatat tgtttcggat cacttttttgg caaacaccgc    540
ctgtttgaac gcatatcacc taaaaaatca tgggaaggtt ccattggcgg aggtattgta    600
gccattgcct cttcatttgt ttttgcctgc tacttcccca tcatgacatg ggcagaatgg    660
gcgggactgg cattggtagt tgtcattttc gggacttggg gtgacctgac agagtctctg    720
ctgaaacgcc aattgcagat taaagattca ggaagtattc tacccggaca tggaggtatg    780
ctcgatcgct tcgacagttc actaatggct ataccggcag gcgttattta cctatatgca    840
ctgacattgg tctaa                                                     855
```

```
<210> 1015
<211> 945
<212> DNA
<213> B.fragilis
```

```
<400> 1015
aagaaattaa aaaagtgtgt tatatttgtg gctaataata ctatattagc tatgaatgca     60
ctacaaagca acattattcg ggagatcact ccgctgtccg ataaggattg tttctacatt    120
gccgaacggt ataaaacgga gtttacttat cccattcaca atcatgccga atttgagctg    180
aactttacgg agaaagcagc cggtgtgcga cggatcgtcg gtgattcggc agaagtgatc    240
agtgattatg atttggttct gattaccgga aaggatttgg aacatgtatg ggagcagcac    300
gattgccatt cgaaagagat ccgtgaaata acgattcagt tctcttccga tcttttcttc    360
aaaagtttta tcaataagaa tcagttcgat tctattcgtg atatgcttga gaaagctcag    420
aaaggtcttt gttttccgat gtccgccatc ctgaaaattt atcccttct cgatacgctg    480
gcatccgaga aacaagggtt ttatgctgtc atcaagttct tgaccatact ttatgaactg    540
tcacttttca atgaagaggc ccgtacgttg tcaagttctt ccttcgcgaa aatcggcatt    600
cattcggata gccgccgtgt gcagaaagtg caggaatata ttaatgccca ttatcaagaa    660
gagatccgcc tgaatcagct ggccgatatg gtaggaatga ctccggtatc tttcagtcgc    720
ttctttaaat tgcgtaccgg taagaatctt tcggactata tcattgacat tcgtttgggg    780
tttgctgccc gcctgctggt tgattctact atgtctattg ctgaaatctg ttatgaatgc    840
gggtttaata atctttctaa tttcaatcgg atcttcaaga aaaagaaaga atgttcgccc    900
aaagagtttc gtgaaaacta caggaagaaa aagaaactgg tataa                    945
```

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<210> 1016
<211> 324
<212> DNA
<213> B.fragilis
```

```
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cttaaacaaa aggaggcaat tatgaaacgg attttcacac tatatctctt tatcttattc     60
tgtctgattt tgcaagcaca agaagaatta tatgaacggg tatacgtaca tacggataaa    120
acgtgttatt tggccggtga agaagtatgg ctcaaatttt atactattga cacacatttt    180
cgcccatctt ctttcagcaa agtgggatac atagaaatat caaatactga acggcctaaa    240
gcacagctta aactggcact tgacaatggg agcggttcgg gcaaagtaaa gattcctaca    300
gacgctcctt cgggaatttt atga                                           324
```

```
<210> 1017
<211> 867
<212> DNA
<213> B.fragilis
```

```
<400> 1017
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gtagcaggga ttgatgtgta tgcacaggag cctgtcaaag tatcccaaga ctccatttct    120
ccggtacgcg aagcccccaa agcacgggca cgccgccatc gcgagccggt cgtttctact    180
ccggccaccg acagtgtgaa agtggagaaa gcagtcgtcc tcccaccgat agacagtttg    240
gagaacctga aacccgccat cgttacggca gacagcctgg aggaagtcaa ccgacagaac    300
ctggaaagga tagaaacacc cgtcatgcca tcggtcgtaa aggcagatag cctgccaccc    360
gtcatgccca agaagctttt cgtacctaat ccgacgaaag ccacctggta tgccatcgta    420
```

```
tttccgggcg gaggacaaat ttataaccgc aaatactgga agttacctat tatatatggt      480
ggatttgccg gatgtgctta cgcattgagc tggaacggga aaatgtataa agactatgct      540
caggcgtata tggatattat ggataacaat cctaatacca acagttttca ggatttgctt      600
cctccgaatc ataactatac cgatacgcaa ctgaaagacc tgctccgcaa acgaaaggac      660
acataccggc gctatcggga tctcagtata ttcgccgtca tcggtgtata tctgatttcc      720
atcatcgacg cctatgtgga tgcggaacta tcgaatttcg acatatcacc cgacctgagt      780
atgagggtgg aacctactat tataaataac aacccgttgc aacccggcag caagtcggta      840
ggcgtgcaat gcagcctcag attttaa                                          867
```

```
<210> 1018
<211> 1206
<212> DNA
<213> B.fragilis
```

```
<400> 1018
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agaaaacgta ccaaaggaca tataacagtt agtgctacga cttttcagaa agctcttctg      120
tctggttttg aaaatttaga aaaaaaatta gactatatca taaatattcc cgatatcgga      180
agcttcccat tacgctgtaa taatccattc ttttcaagaa cgaacttcca atttgctttt      240
atgaagggag ttaatggctc atttcttaat attacttact tgaagaagta tagtatctat      300
caatctgtga taaatgaagc taaacgatgg cttaatttac atagggatga ggaagtaact      360
ataattgtgt actctctcat gtatccatac cttaaggcag ctattgattt gaaaaaacat      420
tattccaata tgaaagtgtg ttgtattgtc ttggatttgc ctgagtattt tggagataat      480
tcatccattc tccatagagt gttagaagca agaaacacta ataagattta ttctttagtt      540
caggaaattg attcctttat tttactgaca gagtttatga aggataaatt gagagttggt      600
attcgtcctt ggtatctttt agagggtatt tatagtcctg tagaagttgc tctacaaaaa      660
aagaggagga aaacgatact ctatactggt aagttagatg ctcgatttgg catacgtgat      720
ctgattgaat catttatcaa gattgatgat agagagtttt ctttgtggat atgtggtttt      780
gggacagatc gagcttttgt tgagactgca gccaagaacg attgtcgtat aacatattgg      840
ggacttgtag atcaaaagcg tgtatttgag atgcagcaac aagccacgtt gttgattaat      900
cctcgtaaag gagatgcaga atacactaag tattcttttc cttctaagac aatggagtat      960
atggcttcgg gaacacctac cataatgtat aaattaccag gacttcctgc taactactta      1020
aatcatttga ttcttatacc ggaccattca cgagaaacac ttactacatt gttaaaagag      1080
tgggggaata agggacagga tgaattggat gactttggta agcatgcaag acaatttata      1140
ttggataata aaaattcaga aaatcaggca aggcgattgt tggaatttct ggtgaataag      1200
acatga                                                                 1206
```

```
<210> 1019
<211> 1029
<212> DNA
<213> B.fragilis
```

```
<400> 1019
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acacaaaagt tctatcagat agatattgct ctgctgagga atctaggtta tgatgtctgt      120
ttatccaata ggatagttga cagtcttaag ttttgggaat atgatatttt gttctcttat      180
ttttatcgat attcattttt tgcttcattt tttgctaaat gtttaggtaa aagaacctat      240
tttactggag gtattgataa tttagatgaa aattatgcct ctacccgaaa ttataagatt      300
caagtgctat ttttttaagct ctgttattgg gtctcaagtt cttgtattat tgtgtctcaa      360
tctgatttaa agaatatagc aaaagtattt catttttagaa gaagattgag ttatagtgaa      420
catgtggttg atactgcaca gtttatgtct gatgttccga agagaagct atttactacg      480
gttgtctgga tgggtgagga agggaatgtg cgacgaaaag gggtggataa ggcattgcga      540
atctttgctg aattgaagaa gataacttca ttttctgatt accgatttat tattatgggt      600
aagaaaggtg agggaactgc cttggttcaa tcattgatta atgaatatga tttagaaaaa      660
tttgttgaat tagtgggtga agtctcagaa gaagaaaaaa ttgctttctt aaaacgttct      720
aaatattatt ttcagctctc attgtatgaa ggttttggct tagcagcttt agaggctttg      780
tgtgccaaca atattctgat tcattcgggt aggggggggct tggctaatcc tatctacaca      840
gatcaacttc tttttgatat agataatgat tttgataaag agttttcgat tttaactaaa      900
aaattggctt cttttacttc attgattcca aatgatgagg tcttaagtta ttatgatatc      960
```

```
cagagaagaa aagaagattt taaggctatt attacagaca acaataggaa ttataaatta    1020
aataattaa                                                             1029
```

<210> 1020
<211> 375
<212> DNA
<213> B.fragilis

<400> 1020
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ttgttaaacc ttaaatctat ttttatgaaa ataaaaaaat tatttactat tctaacagtg    60
ctttgtttct ctgctttagc aggagttgtg tttcttaaat tcgtagataa taaaaagaac    120
gccagagata ttgcattggc aaatgttgaa tctcttgcta atgctgaagg cgatggtata    180
gggaatgagg ataatccatc aactacgata aaaaagtgtg taagctccag tgaatttaca    240
aaagatgatt ctacgggaga gtattatttg gtgtgtaatt caggaactac cgaaagcgtt    300
atttaccgtt gtccatctgg tactaccgaa ggtcacaaag attggatata tagttttctt    360
tattgtacga gatag                                                     375
```

<210> 1021
<211> 981
<212> DNA
<213> B.fragilis

<400> 1021
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acaaatatag aaaattcaaa cgataaaattg gttacttttg catcagtttt caataaaggt    60
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aacatgatgt gggggctgat gtcccccatc ggtaaatcgg cattggcaga gttctcagcg    180
ctttcggtaa ccaccttccg catggtaggt gccgcagcag ctttctggat actttccgct    240
ttctgcaaac aagagcaggt aggacaccgt gacatggtga agattttttt tgcttctctg    300
tttgcccttg ttttcaatca ggggatattt atattcggat tgtctctcac ttctccgata    360
gacgcatcta tcgtaacaac aacttcacct atcatcacta tgattgtagc ggccatctat    420
ctgaaagaac cggttaccaa caaaaaggtt ttgggcatct ttatcggagc aatgggagcg    480
ttaatcttaa ttctaagcag tcaggcagta agtgcaggag gaggaagcat ttggggagat    540
ttactttgca tgattgcgca acttagcttc tccatctatc taaccgtatt caaagggtta    600
tcccaacgct attcggccat cacgattaat aagtggatgt ttatctatgc atccatctgt    660
tatattcctt tctcataccca ggatatagca agcattaagt gggacagcat ttcgacagcc    720
gccatctatc aagtactttta tgtggtacta tgtggaagtt tcattgctta catctgcatc    780
atgaccgcgc aaaaactaat gcgccctaca gtagtaagca tgtacaatta tgtacagcct    840
attgttgctt ctattgctgc tattttaatg ggaatcggaa gcttcggctg ggaaaaagga    900
gttgcgatcg cattggtatt tcttggagtc tactttgtga ctcaaagtaa atcgaaagca    960
gatttggaag gtgtgtcata a                                               981
```

<210> 1022
<211> 756
<212> DNA
<213> B.fragilis

<400> 1022
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ctaaaaaaag agatgaaaaa aataaaacta ctttggatgg caatgttgac actgatgctg    60
ccggcattgc aatcgtgtga cgataatgat ggctattcat tgggagatat agcggtagat    120
tgggctacgg tacgtgtggt cggtggcgac acttattcgc tgaatgctga ccgttgggga    180
actctttggc cggctgcaac tgctattcca ttttataagc cgatagacgg gcaacgggtg    240
attacttact tcaacccact ttacgataac tatgaaggat atgatcatgc tgtgaaggta    300
gagcataatt ataatgtcct gaccaaacag gtagaagatt tgacggctga gaatgaatcg    360
gaatttggga atgatccggt ttgggttaac aaggatatga tgtggattgg cgggggatac    420
ctgaatgtca ttttccgtca gaatttaccg gttaaggaga agcatcttgt cagtctggtt    480
cgtgataagt gggctacagc tgctgaggga gaggatgatg gatacatcca tttggaattt    540
cgctataata catacgatga tgtgaccgct cgccaggcga atggtgccgt atctttcaac    600
ttgaattcat tggatctgac cggtaagaaa ggcattaagg tgaaattgaa ttccgtaaag    660
gacggggaaa cggaagtggt ctttaacttta aagggccagt caatgccgga ggaagcaaag    720
```

caggtgacgc tttcggatga agtgcaaata aaataa 756

<210> 1023
<211> 903
<212> DNA
<213> B.fragilis

<400> 1023
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ctctccatgg aagaggtgaa aaccgaaggt tcttcgtcta ttaacgaaat agaactgtcg 120
aaaatctccg tcaaccccaa ccaaccacgc cgtgagtttg atgaaacggc actggaggag 180
ttggccgatt cgatcagaga aataggaatt atccaaccca tcaccttacg taaagtctcg 240
gacgacgagt accagattat tgccggagaa cgccgctacc gcgcctctca gaaagccgga 300
ctggatacta ttcccgcata tatccggaca gccgatgatg aaaacgtgat ggaaatggcg 360
ctgatagaga atatccagcg tgaggatctt aattcagtgg aaatcgcact ggcctaccag 420
cacctgatag agcaatatga cctgacacag gaacggctga gtgaacgtgt cggcaagaag 480
cgtacgacca ttgccaacta tctgcgcctg ctgaaactgc cggcaccgat acaaatggcc 540
ctgcaaaaca agcagataga catgggacac gcccgggcac tgatcacatt aggcgatccg 600
aaactacaag ttaaaatatt cgaagagatt ctggaacacg atactccgt tcgcaaagta 660
gaagagatcg tgaaatcgct gagcgaggga gaagccgtaa agagcggaac caaaaagata 720
accccgaaac gggccaaact gcccgaagaa ttcaatatgc tgaaacagca cctttcggga 780
ttctttaaca ccaaggtaca actgacctgt tctgaaaaag gaaaaggaaa aataagcatc 840
cccttcagca atgaagaaga gttggaacgt atcatggaaa tcttcgattc actgaagaaa 900
taa 903

<210> 1024
<211> 810
<212> DNA
<213> B.fragilis

<400> 1024
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ataacaacaa acacatgtct atatccggag ctcaacaaaa taagtccagc caatgaacac 120
ttaaccatgc aaatagcctc gcaagtttac aatattccta cagcagccaa tgggctctgt 180
ttttttcaaa atgatgaacc tgcctatatc acacgacgtt ttgacattgc acccaatgga 240
agaaaattca gaaaagaaga ttttgcttct ttagccggaa tatcaaaggg taataaaggt 300
cccaactaca aatatgatgt attaagttat gaagagatgg cggatattat caaacagtac 360
gtctcagcat catctgtaga ggttctaaaa ttctttcgat tagttatttt caacttcctt 420
ttttcaaatg gagatgctca tgctaaaaat ttctctttgt tagaaactcc ttctggagat 480
tttatacttg ctccggcata tgatttgcta aataccagac tgcatatttt tgatgatcat 540
gtatttgctt tacaacgtgg cttgtttaaa gagaatacat aaaacggaaa tgacggtgcg 600
gttacaggaa aagaattcat agaatttggt atccgcatcg gcattccccc caaaagagtt 660
cataaagagc taataagctt ttgccaaaag gcagaacaag tacaagattt agtcgaaaaa 720
tcatttttac cgaatcaatt aaagaaacaa tatttactcc attaccaaat gagaaaagat 780
tcctatcttt cggtaggcat tctcacataa 810

<210> 1025
<211> 1443
<212> DNA
<213> B.fragilis

<400> 1025
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atttggacgg aatccacccg atatatgagg aatgagggag aaaaagtgtt tttcagaaat 120
cccattgctg taattaacac ttcccgagta tcagactccg atcctattga actagcggat 180
tctgccgaga tatatccgaa agggaaaccg ggtaccaccg aaaatattca tataaaaact 240
tcccggtcga actacaacac acgccaactc gtagaattga ccattaatag actaccggat 300
gaagtatccg atcttactgt ctcggtaagc cgtaatgatt cactggtaac cctcccgcct 360
cttgaagaat ccacctggag caaacaagtg accgctactc ccggaacatt ttccggaaaa 420

```
tggataccgg aatatgaagg gcatatcatc tgcggacaga tagaaagccc tacaggagaa    480
acattgaagc aagtacaaaa tgaacctata tcagccgaca tcgctttcgt aggaaaagat    540
atacgatatg tgcaaggaca agtggaatcg ggaggaaata cactgttcta cacaagccat    600
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atgaacatct tatcacccct cagtgaaaag ttaccccaaa acttgccatc attaaaactc    720
tatcggaata aaaaacgact gttggaaagg agcataggta tacagctgca gcaagtcaca    780
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gaaggagaaa aaagattcaa tatcggaaat acattggtac tgctggacgg tgttcccatt   1020
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aacggccgtt atggatttgg tggtgaagta ttcgaatgca tgatttcact tactacccaa   1140
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ccgcaactgc ctgttacatt taagatgcct gaatataaag acgctactga caaaaaatca   1260
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gaaggcttca cattaaaagg agagctgatc agaggcgagg taaacttcca tgtgaaaaaa   1440
tga                                                                 1443
```

```
<210> 1026
<211> 951
<212> DNA
<213> B.fragilis


<400> 1026
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gaaacatttg cagcttttga tcgattctgt aaagcaaatg gaataaaata ttatgcggct    180
tatggaacgc ttatcggtgc tgttcgacat aaaggactaa ttccatggga tgatgatata    240
gatgtttata tgttacgtga agattatgat aaattctgct ctctgaaggg aaaagtcatg    300
gatcattatg atattatgga tattaatgac gatggttatt ggttactctc tttagcaaag    360
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gaagtgccaa ttggttatga ggagtgttta aaaagtatat atggagatta tatgaaacta    840
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```

```
<210> 1027
<211> 2778
<212> DNA
<213> B.fragilis


<400> 1027
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agtataacta ttgactcttt attggagact gtagaaaaaa atacacccta taggattttc    180
agcactatta gtgctccttt caaggttttg gtgaaaggaa aagcttcacc cctgcaacaa    240
ttaaaagaag cacttgagcc gactccctat aaattgtcag tatccggaaa caatttattc    300
gtgctgaaag agcaggaact catcacgcta ttacctgcta aactgaccgg agaaccggaa    360
aaaggcgaaa gttattatgg tgacgtatat acttacctaa gcggagaacc tgaaaaggca    420
tcttcagaaa acaaagtgta taatgtggga gatgtacgaa tcaagcaacc accacgaaaa    480
gcggtactca aagggcaagt tactaacttt aaaaccggtg agcccatgat aggcatcaat    540
ctgattttaa aggacccatg gattgcgacg acaacagatg ttaagggaaa ctttactctt    600
gaacttccta ccggacacaa acaaattgat atcaaaggac ttaacattaa agatacccgt    660
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cgacaaatta tgctttacag tgatggtaca ctggacatcg aacttgaaga aactacgcat    720
atgctggacg aagtaaccat tacttccgga cgtatacaaa atgtgaaaag tacgcaatta    780
ggtgcagaaa cactgcgtcc aacccaattg aagaatatcc cgatggcctt gggagaagta    840
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atctataacc cgaaccattt attcggcttt tttgcagcct tcaattcaga tatggtaaaa   1020
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ccacgttcgt actatcaata tgcatcaggc atgctcccac acgaatcgac cataacggac   1860
accatcactg caggagcagg aaaaattcatg aagacttatc atgggccgga attccggtta   1920
tccgcccggt atgccttcac agataatttc tcggtcaaag ccggatttaa ctcgatgcgg   1980
caatatatcc ataagttgtc gaacactgtc attatgtcgc caacggatac atggaagttg   2040
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tctccgagtg gcatctggga atattctgtg gaaggatatt acaaacgaat gtccgattac   2160
ctggattatc gtggaggagc aaagctactt atgaaccacc atattgaaac tgacgtcatc   2220
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aacggatgga tgagttacac gtattcacgt accttcttga gacagaatga taaacgaatt   2340
gagaaaccgg tgaataacgg tgactggtat cctacagaat acgataagcc tcacgacttt   2400
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agcacaggac gccccactac cataacctgcc ggacagtatt atgatgaatc aacgcaatcg   2520
atgcgagttt actatacgga aagaaactca taccgcatac cggattactt tcgtacagac   2580
atctctttta atatagaacc cagccatcat ctgaccctgt tgacacatag ttctatttcg   2640
attggggtat acaatgtaac cggaagaaag aatgtgtatt ctatttatta tatgccggaa   2700
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tataacataa aattctaa                                                 2778
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<210> 1028
<211> 1017
<212> DNA
<213> B.fragilis

<400> 1028

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gagaagtcaa aatcggacat tataatagca tgtgggggcg gaagtgtact tgacatggct    180
aaattaattc gttttaaagc tgcttatgat ggcgatttgg ttgattctgt ttttgaaaag    240
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cttcctgatt atgctgtgat atttcctcag tttacttata ataattcttc atatctgaca    420
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acagcagaat ctgatgaata tgccaaaaga gctatttctg ttctttggga taatcttcca    540
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tctgggtgtg caattgctat tactaagact acagctccac atgctttttc gtatgctttt    660
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gcattaaact tattggaaaa acaggacttt gctttccaac caagaataaa tattgatgag    780
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cagtctgaaa tgcaaagtta tctgaacaat ataggtttat gtaataatgg atatggagat    900
aatgacttga ccataatgtt gaatcaggta aatattcagc gattggtaaa taaccctgtc    960
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atagttacaa aagacataat agaacgattg aaaaatgttc tgggaacaat aaattga   1017

<210> 1029
<211> 1257
<212> DNA
<213> B.fragilis

<400> 1029
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aagctgagac tgttgattat agtcggtacc cgtccggaga ttatccggtt ggctgccgta   180
ataaataaat gccgtcgata ttttgattgt attttggctc ataccggaca gaattatgat   240
tataatctga acggagtctt ttttcatgac ctgagcttac aggctccgga tgtctatatg   300
gatgctgtag gggatgattt gggttcgaca atgggtaata ttttgaatgc gagctataaa   360
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agtgtaatca gcgctaaacg cttgcatatt cctatttttc atatggaagc cggtaaccgt   480
tgctttgatg agtgccttcc tgaagagaca aaccggcgta ttgtagacat tatttctgat   540
atgaatcttt gctattcgga gcatgccaga cggtatctga atgcttcggg tgtggcaaag   600
gaacgtactt atgtaaccgg ttctccgatg gccgaggttc tgtctgagaa cctttctgct   660
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tctgcacatc gggaagagaa tattgatact gacaagaact tcgcttcatt gtttgaaggc   780
ataaacgcga tggctgaaaa gtatgacatg cctgtacttt acagttgcca tcctcgtagc   840
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tgtattcgca caagtaccga acgtcccgaa gctttggata agggatgttt tattcttgcg   1080
gggattgata aagcctcttt gcttcaagct gtagatactg ctgtggaaat gaataggaat   1140
ggtgataatg gtgtccctgt tccggattat atggatcgaa atgtatcgac aaaggtggtg   1200
aagttgattc aaagttatac aggaatagta aacaaaatcg tctggagaaa atcctga   1257

<210> 1030
<211> 426
<212> DNA
<213> B.fragilis

<400> 1030
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atatactgga tttatgatgt accggggggg gaaagacgtg gtggccatgc ttataagaaa   180
aatcaagaat ttatagtagc tctttctggt agttttgatg ttgtattgga tgatggaaat   240
tgtgagaaag ttttttcttt gaatcgctct tattatggaa tttatgttcc tcaaggtata   300
tggagaaaaa tgcaaaattt ctctactaat gcactggcgt tagtgttatc ttctacaaat   360
tatgatccag atgattatat tttggaatat atagattttg tgcaaagtaa aaagaattca   420
ttatga   426

<210> 1031
<211> 594
<212> DNA
<213> B.fragilis

<400> 1031
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gctccggggc gaccgatgat cttattcgaa ggtcacatct tttggcgtga actcaagaag   180
cggggactag atccggagag gtatgttgcg ggcaatgaaa atattcttta tcctaaatgg   240
gagaagggtc attattatgg cgggatgaaa gagtatgaac gtctggaaaa ggcctggcaa   300
atacataaag aagctgctga cgcttccact tcatggggaa tgttccaagt gatgggcttt   360
aactatgcga tgtgcgggta tggcagtgtg gaggaaatgg tgaaagatat gtgtgtcgga   420
gaagataagc aactggaagc ttttgcgagg tttgtgaaac ttgctaagtt gcagtcctat   480

ctggagcaga aagactgggt cgggtttgcc aagaggtata atggacccgg atatgcccgg   540
aatcagtatg ataaaaaact ggaaggggct tatcggaagt ttacgaagga gtag   594

<210> 1032
<211> 501
<212> DNA
<213> B.fragilis

<400> 1032
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ctgatgtatt tgggcatgga cgggagtccc atttacagcg atgacttgtc ccgccgcaac   120
aatgaagttt accgcttgac cacaacattg tataattccg gtgtccaagg ttccacggtt   180
gaagaacagg cctctgtctg tctcgctctc ctaatgggtt acaacgcatc gttcatcgac   240
cacggagaaa agcgcgaaca tgtccagaag atattagatc gttgctggga tatcctcgat   300
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gacgagcctt tggctgacga agcccgttca atcatcgctt cttgggattc ggtgtcactt   420
actactgaac agcaagaggc tatcaacgag tttcagactg tggtggataa cccttatccg   480
tgggagtatg ttgaagaata a   501

<210> 1033
<211> 891
<212> DNA
<213> B.fragilis

<400> 1033
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accaaaggag tcagtaagca gttacttccg atattcgata aaccgatgat ctattatcct   120
atctctgtac tcatgttggc agggattcgt gagatcttga ttatctccac tccttatgat   180
ttacccggct ttcaacgttt gctgggtgac ggttctgatt atggagtgcg atttgaatat   240
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ggtgatgatt cagtatgttt ggttttgggt gataatattt tttacggaga tggattgatt   360
gaaatggttc aggctgctgt gaaaaaggct gatttagaga ataaagctac agtttttggt   420
tattgggtga gtgatccaaa acgttatggg gtagttgagt ttgataaaga aggaagtgtg   480
ttaagtcttg aagaaaaacc acgtgatcca aaatcaaatt atgcagttat aggtctttac   540
ttttatccta atgtagttat tgagttagct aaaaatgtta taccctcatc tcgtggcgag   600
ttggagatta cttcaattaa tcaagaattt ttatataaga aaatgttaac agtgcagcta   660
ctaggacgtg gctttgcttg gctagataca ggtacacatg attctttggc agaagctagc   720
acatttatcg aagtgattga gaaaagacaa ggattgaaga ttgcttgttt agaggatata   780
gcttttggac aaaggtggat tactattgat aaattgcgaa aactggcaga aaagatgaag   840
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<210> 1034
<211> 798
<212> DNA
<213> B.fragilis

<400> 1034
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tattatttcc tgagccgtcc ccgtcgcttt ggcaagagtc tgctgatatc tactcttgaa   180
gcttattttc aagggaaaaa ggacttgttt cgtggtttgg ctatggagga gttggaaaaa   240
gattggataa aatatccgat tttacatctg gatctgaaca ccgaaaagta tgatacgccc   300
gaaagcctgg atcgaatatt gaacgatacg ttggctaaat gggaaatggt gtacgggact   360
gctccttctg aaacttctat tcctttgcgt ttcaagggta ttgtacagcg tgcctgtgaa   420
cagtcggggc agcgggtggt gattttgatt gatgaatatg ataaaccgat gttgcaggct   480
atcggtaatg aggagttggg agagaagtat cgtgatacac tgaaaggttt ttattctgtg   540
ctgaaaacga tggacgggta tatccgcttt gcccttttga cgggagttac caagtttggt   600
aaggtaagtg tgtttagtga cctgaataat ctgaacgata tctctatgga cgaaccttat   660
gtggagttgt gtggaattac agaaaaggaa atccatcatt atctggaacc ggaaattcgt   720

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cagttggcga aatatcaaaa gatgtcgtac gaagatgctt gccgtcttca ccacagggct    780
ggaaggatcc tcgaatag                                                  798
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<210> 1035
<211> 888
<212> DNA
<213> B.fragilis

<400> 1035
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atggaaaata aaagacctct gatcctcgtc tccaatgacg acggcatcat ggcaaaaggt   180
attagtgaac tgataaaatt cctccgcccg ctgggcgaga tagtggtaat ggccccggat   240
gccctcgtt ccggcagtgg atgtgcatta acggtgacac agccggtgca ctatcagtta    300
ttaaagaaag atgtgggact gactgtttat aaatgttccg gtacaccgac cgactgcata   360
aaactggcac ggaatcagat actcgaccgg aagccggacc tggttgttgg tggaatcaac   420
catggtgaca attccgctac caatgtgcac tattccggta cgatggggat cgtgatcgaa   480
ggttgtctca atgggattcc ttctatcggt ttctctattt gtgaccacgc ccccggagct   540
gattttgatg cagcaggacc ttatgtccgg agaatagctg cgatggtgct tgagaaagga   600
cttccgccac tgacttgcct caatgtgaat tttcctaata ctcaggagat aaaaggggtg   660
agaatctgcg aacaggccaa aggacattgg agcggagaat ggcaggcttg cccccggaga   720
gacgatgcga atttctattg gttaaccgga gaatttatcg atcatgaacc ggaaaacgaa   780
aagaatgatc actgggcact ggctaatgga tacgtagcga ttacacctac tgtagtggat   840
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<210> 1036
<211> 549
<212> DNA
<213> B.fragilis

<400> 1036
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cctatgcaat ataagataag tataaagaaa gggaaaaaag tccgtgtttt ggttcctatc   180
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gttgcttatt tgcaatatat caccgatacc cgtagcggca agaagatcat tatccccgac   300
aatgaaatgc agcgtttcat tgctgtagcc ggtacttaca gtgaccatct tttatacttt   360
caacccgatg aactcaactt gtccaaagga accaaagtcc gtattacagg tggtgacttc   420
gagggccaag aaggtgtttt cctgaaagtg aaaggtgccc gggatcgtcg cgtagtcatt   480
gctatacaag gtgtcatagc cgttgccatg gccactattc accctgatct tatagaagta   540
atcaaataa                                                          549
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<210> 1037
<211> 2043
<212> DNA
<213> B.fragilis

<400> 1037
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tctatcagta tggacaataa cagcaagaaa cccaacaata aagtaaatat gcccaagttc    60
aatctgaact ggatgtatat gattatcgcc ctaatgcttt tagggctgta tttcgctaat   120
ggaagcagtt ctgtcagtaa gaacatctct tacgatgagt tccagcagta cgtacgtgac   180
ggctatgtaa gtaaagtgat cggttatgat gataattcgg tcgagattta tatcaaaccc   240
cagtacgtag gaaccgtatt caaacaagat tccacccgtg taggccggaa tccgatgatc   300
actacggaag cccctcacg cgagaacctg ataactttc tacaaaaaga aaaagaggag     360
acgcactttg acggttctgt cagctatgat aagaaaaaag actatttcag tgcaatactt   420
tggaatgtac tgccgattgt cttcctgatt gctttatgga tattcttcat gcgacgcatg   480
ggcagtggtg ccagcggagg tgcaggcgga gtattcaatg taggaaagtc gaaagcccag   540
ctttttgaaa aaggcggttc catcaaagta actttcaaag atgtagccgg actggcagaa   600
gccaaacaag aagtagaaga aattgtggaa ttcttgaaag aaccccagaa atatactgac   660
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```
ctgggaggta aaatccctaa aggcgctcta ttggtgggcc ctccgggaac aggtaaaacg    720
ttgcttgcga aagctgtggc cggtgaagcc aatgtacctt tcttctcttt ggccggttcc    780
gatttcgttg aaatgtttgt cggtgtaggt gcatcccgtg tacgcgacct cttcaaacaa    840
gctaaagaga aagctccttg tatcgttttc atcgacgaga ttgatgctgt aggacgtgct    900
cgcggtaaga atcctgcaat gggcggaaat gatgaacgtg aaaatacgtt gaaccagttg    960
ctgacggaaa tggatggttt cggctcaaat agcggtgtta ttatcctggc agccaccaac   1020
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aaaacaaaga ttactacgga agccgaacgt cggtctattg ccctgcacga ggccggacac   1380
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atcggccgtg tatcaagcgg agctgctaac gatcttgagc gcgtaaccaa acaggcgtat   1620
ggcatgatcg catatttggg tatgagtgaa aagctaccca atttatgcta ttataataat   1680
gatgagtatt cattccagcg tccatatagt gaaaaaactg ccgaactgat tgacgaagag   1740
gtcaaaagaa tggtaaacga acagtatgaa cgtgccaaac agattctctc ggaacacaaa   1800
gagcaacaca acgaattggc acagctactg atcgataaag aagtcatctt tgctgaggat   1860
gtagaacgta tctttggaaa acgtccttgg gcttctcgtt cggaggaaat catggcagct   1920
aataacaaac aagaaaacgc cgttcatcct gcagatggag aagatgtaga cacaactact   1980
ccgcaagcaa cagagtctca agagggcaat acgcaacaag agtcagcggc atcacaaaac   2040
taa                                                                2043
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<210> 1038
<211> 423
<212> DNA
<213> B.fragilis
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<400> 1038
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gttttttatt cttatgacat tcctggtgga ggagctcgag gagcccatgc tcataaagaa    180
tgccatcaat gtttaattgc agcaagtgga agttttgaag ttgttttaga cgacggtgtt    240
aatagaaaga cagtactttt aaatcgtcca tattacggct tacatattcc gccaggtgtt    300
tgggcttccg aacaaggttt ttcctctggt gcaatctgtt tagtattagc ttctcatgta    360
tatgatgaaa atgattatgt gagaaattat cagaactttt taaataacaa agagatacta    420
tag                                                                  423
```

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<210> 1039
<211> 597
<212> DNA
<213> B.fragilis
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<400> 1039
tcagtaacaa tcatgttttt atatggtgcc agtggtcatg ccaaagtgat cattgatatt     60
ttacgagccg gtcatgaatc gattgaagcg ttgtttgatg ataatgtgga ggttacttct    120
cttcttggtc atcccgtatt acgtccgtca gaagtgcggg gaccactgat cgtcagtatt    180
ggaaataatc ggatacggaa gaggattgtg gatactttgt ccgtggagtt ggatgtgct    240
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caagggagta ttatacaggt gtgtgctcag gtaggcagac attgcattat taatacgggt    360
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cccggtgtga agataggaaa gtggagtgtg atcggtgctg gttccgtggt gactaaggat    540
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```
<210> 1040
<211> 618
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<212> DNA
<213> B.fragilis

<400> 1040
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tttcctggct tagtaaatga agtattgatg ggaaagcttg gaattcttag tctgatgttc   120
tgcaccattg ttctattatc ctgtggtaaa aagaaaaacg tatatccgga actagaagct   180
tttatcggaa aagaaattat cttttccgat aaaaacttta atacggttgg taataaggct   240
tttaaagacc aatttttact gatatcttat gtcgattcgg gtaattgtac accttgtagt   300
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gttcttatga ttgtgcatga aaaagatact tttactgtta atgaggtgtt tagacaaatg   420
catgtcagtt atccgatatt ttttgattca ttgggatgtt ttaaaaaaga aaatggtatt   480
tttgataatc ctttatatca agatttcgtt atagaccgct caaataaggt agtatggttg   540
ggaaacccctt tacgtaataa gcagtcatgg cagcaatacg agaaagccat atctatgtta   600
atggatagtg gtaaatag   618

<210> 1041
<211> 897
<212> DNA
<213> B.fragilis

<400> 1041
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tataataagt atttagcaat tgggcgtact atagaatcag taattgtgca aacttataaa   120
gattgggaac ttctgattat tgacgatggt tcgaatgacg gcagtgggca agtggctgag   180
caatatactt ttgatgagcg tatccattat atttataagt caaatggtgg tgtatcgtca   240
gcacgtaata tggggataca aatggcgaaa ggtgaatggc tgctttatat tgatgcggat   300
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aatgtaagtg aaggggtcgt gttaaataac tttcgttcac ttttctttaa ttccttcgat   480
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gcaataactc ctcaatttac tatggtatat actaaggatt atgctggttt aagtaaacca   660
gcaagtgact tttcaaagga ttatatatca tgtatgtctt ttgaaggaaa accgttttgg   720
gaaaaaatga agcttggttc tttagctaat tatggtttag atatctaccc taataatcga   780
agtgaaatta aagctatata ttcaaatgac ctcaaatgga tatatcttag cgctaaaatt   840
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<210> 1042
<211> 1497
<212> DNA
<213> B.fragilis

<400> 1042
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gctccacaaa atgtatggaa gcactttttat tctttgacac agattccccg gccatcggga   120
catatggaaa aaattaccga atttctggta aacttcggta atagtcttgg attgaaaact   180
tttgtggatg atgccggtaa tgtgattatc cgtaaacccg ccactccggg gatggagaat   240
cgtaaaggag ttatccttca ggcacatatg gatatggttc cgcagaaaaa taacgataca   300
gttcacgatt ttgagaaaga tccgatcgaa acttatatag atggtgaatg ggtaaaagcg   360
aaaggtacta cattgggggc cgataatggt ttgggtgtag ctgctatcat ggctgttctt   420
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cttgattctg aagatgaagg tgaactttat attggctgtg ccggtggtat ggatgtaact   600
gcttctcttg aatataagga agttgctccg gaagaaggtg atatcgctat tagagtgaat   660
ctgaaaggtc ttcgtggagg acattccgga ttggagatta atcagggacg tgccaatgcc   720
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<211> 5784
<212> DNA
<213> B.fragilis


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<211> 1089
<212> DNA

<213> B.fragilis

<400> 1044

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aataagataa ctgcattctt atgggtaatt atgatgactt tgtttgtggg gtctcaagat   180
ggtataggaa atgaccatgc taattatatt gctcagataa aatccccatg ggccactcct   240
caggaaccat ttacattatt tatattctat ataattagat cttgtgattt atctgtttat   300
gtattttttct atatctatgc ttttcttact tattatttttt tgtataaagt gatattatta   360
tcagataaga gtattcgatt tattattgta atgatgatac ttcaatctct attatttttt   420
caatcgttta atttgattcg ccaaattttg gcttgcgcaa tattttttgta tggaatatct   480
cttatattaa ataataaaaa aggatattgg tttctattat tagcatgttt ggtgcattat   540
tctgcatttt ttggactact tatagtttgg atagcctcaa aaataagagt aagtactgtt   600
atgcttattg tttatataat gtctgtagct cttttatata caggtggttt tattggagat   660
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tctcttatta atgatgatgt agcagcaaat tttggtgttg tatataagat tacctttatt   780
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caacgtgcta cttattttcc ttatttctct atgatattag taatcccttt attggccaaa   960
tgttttttctc catattggaa ttctaggtta gctttagtac tgtattcatt atattttctt  1020
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<210> 1045
<211> 846
<212> DNA
<213> B.fragilis

<400> 1045

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tgtacgccaa atacttcttt acgttcgttc agatcaggta aatctacatg gatttgtcgg   180
tcgaaacgtc cagcacggag caatgccttg tctagtacat ccacacggtt ggtggctgcc   240
aggataataa caccgctatt tgagccgaaa ccatccattt ccgtcagcaa ctggttcaac   300
gtattttcac gttcatcatt tccgcccatt gcaggattct taccgcgagc acgtcctaca   360
gcatcaatct cgtcgatgaa aacgatacaa ggagctttct ctttagcttg tttgaagagg   420
tcgcgtacac gggatgcacc tacaccgaca aacatttcaa cgaaatcgga accggccaaa   480
gagaagaaag gtacattggc ttcaccggcc acagctttcg caagcaacgt tttacctgtt   540
cccggagggc ccaccaatag agcgccttta gggattttac ctcccaggtc agtatatttc   600
tggggttctt tcaagaattc cacaatttct tctacttctt gtttggcttc tgccagtccg   660
gctacatctt tgaaagttac tttgatggaa ccgcctttttt caaaaagctg ggctttcgac   720
tttcctacat tgaatactcc gcctgcacct ccgctggcac cactgcccat gcgtcgcatg   780
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aaatag                                                             846
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<210> 1046
<211> 1323
<212> DNA
<213> B.fragilis

<400> 1046

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aacggcaaag aacgccaaga gagcatcgaa cttcccaaaa gtatgactta tcctctcgat   180
agcctgctca acgactggaa agccaagaat tatatcgact taggaaaaga ctgcagtaca   240
gcggagatta acccgctgtt cagcgactcc gtatacatcg accgcctatc acgcatgcca   300
actgttatgg agatgccata caacgaaatt gtacgtaaat ttattgatat gtatgccgga   360
cgcctgcgga atcaagtctc ttttatgttg agtgcctgca acttctatat gcctatcttt   420
gaggaggccc tcgatgcgta taatttacca ttggaattga aatatctgcc tattatcgaa   480
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tcggccttga acccgtcggc agtatcgcgc gccggtgcag gaggcttgtg gcagttcatg    540
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aacggggata ccctgggagc cattgcggca aaatatggtg ttcgcgtaaa agatcttcaa   1260
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taa                                                                  1323
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<210> 1047
<211> 1140
<212> DNA
<213> B.fragilis
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<400> 1047
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ggtgatataa cagttatcaa atcgtttgat aacgatactt tgttgtctcc ggtaaaagta    180
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ttcaaccgac cggttatttt gaaggatgat aaatatgatg ttctgagtgg catgtttttac   720
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<210> 1048
<211> 819
<212> DNA
<213> B.fragilis
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<400> 1048
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ccgggaatgg gtgtgctcac tcagtttctt gttaagaaag aacggttggt aaaagttgta    180
gaggtagact acgaatcagt agcctatttg cgagaagcct atccgtcatt ggaagataac    240
atcatcgagg atgacttcct gaaaatgaac ttacaacgtt gttcgacgg acatcctttc     300
gtcttaactg gaaactaccc ttacaacata tccagccaaa ttttcttcaa aatgctggat    360
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gccgccggac cgggtagtaa aacgtatggt atactcagcg ttctgataca ggcctggtat    480
cgggtagaat atctgtttac agtaaatgaa caggtgttca atccacctcc caaagtgaaa    540
agcgcagtca tacgaatgac acgcaacgag acacaagagc tcggttgtga ccccaagcta    600
tttaaacaaa ttgtaaaaac aactttcaac cagcgtcgaa agacattacg aaattcaatc    660
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aaaccgattt taggtaaaga ttgcccgttg acagaagacg ccctgtttaa taaacgaccg    720
gaacaactat cggtacaaga gtttatccac ctgacaaatc aggtggaaca agcactaaaa    780
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<210> 1049
<211> 1416
<212> DNA
<213> B.fragilis

<400> 1049
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gatgaacgcc ttcgcggaat atttccactg aaaaagatga tcacatctcc ctctgtatct    660
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aactctatga tattgggga ctttgattcc acttttgccg cgcatcccga aatggccctt   1020
tacattccat tgattggtgg tacaggcgga aacgtaggga ctcaatcgtc agctctcgtc   1080
gtacaaggct tggccaacag ttcccttgac gccaaaaata ctttcaagca agtcagcaaa   1140
gaagccgtag ttgccttgat caatgctacg atcatctctt tactggtata tacctataat   1200
tttatccgtt tcggagcaac cgccacagtc acttattcgg tatctatcag tctgttctca   1260
gtagtgatgt ttgcctccat cttcggtact ttggttccaa tgacactcga aaagatgaaa   1320
atagatccgg ccatagctac aggaccgttt attgccatta cgaacgatat catcggcatg   1380
atgatgtata tggggattac ggtgttatta tcgtaa                            1416
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<210> 1050
<211> 1104
<212> DNA
<213> B.fragilis

<400> 1050
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aatatggaag taagagtttg gaattatttta aaagagtatg catcttctaa agaagaaata     60
ctaaaggctg tagaagatgt ttttgaatca ggacaactca ttcttggtgc aaaaggaaaa    120
cactttgaac aggcgtacgc tgaatattgt ggtgttagtc atggtgttgg ttgtgataat    180
ggtactaatg ctataagttt ggcattactt gctgttggtg tgaagcctgg tgatgaggta    240
attactgtgc ccaatacggc cattcctact gtttcggcta tagtaactgt cggggctacg    300
cctgtttttg tagatattga tcctcttact tatttaatgg atgtgacaaa ggtggaaagc    360
catattacgg aaaagacaaa atgtattctt ccagttcatc tttacggaca gtgtgtcgat    420
atggatgaac ttatagcttt ggcctggaaa tataaattat ccattattga agactgtgcg    480
caagctcaag gtgcagaata taaagggtat aaggcaggtt caatgtctaa tgcttctaca    540
acctcattct atcctacgaa aatattaggt gcttacggtg atggtggaat gattattacc    600
aatgatgcag aggtggaagg gaaattgcgt cgtttgcgat tttatggtgc agagaagatg    660
tattatgcta tcgaacatgg ttataattct cgtttggatg aagttcaagc tgccatcctt    720
ttgacaaaat tgcctcattt ggatcaatat atcaaacgta gaagagaaat agcgtatttg    780
tataatgaat tgctgaaaga taccaatttta atattgccaa agaagcaga ttacggtaaa    840
catgcttatt atttgtatgt agttcgtcat tctaatcgtg atgaaatcat ggcagcatta    900
aaagaaaata atatatttgt aaatattagt tatccatggc ccattcatac catgacaggt    960
taccagttcc ttggttataa ggaaggtgac ttccctgaaa cagaatctgc tgcaaaagaa   1020
atattttctt tgccgatgta tcctacatta acggatgaag aagttcatta cgtgtctgat   1080
```

atattacaca aaatattaaa atag   1104

<210> 1051
<211> 1140
<212> DNA
<213> B.fragilis

<400> 1051
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agtttactct tcatatttac tttacttact attactttat cggctgtagc tcaacctcgt   120
atctcttcta ataaggagac ccatcatttc ggacaaatcg aatggaaacg tccggtttct   180
gtagaatata ctattaccaa tacaggtgat aaacctttgg tactgactaa tgttaccact   240
tcttgtgcct gttcggttgc taactggacg aaaactccga ttgctcccgg agaaaaagga   300
acagttagtg ctacgtttga tgctaaagcg ctagggcatt tcaataagtc aatcggcatt   360
tacagcaatg cacagcctag tttggtttat ctgaattttg acggggaggt ggttcaggaa   420
atcaaggact ttactaaaac acatccttat gcaatcgggc aaatccggat tgatcgtaca   480
gatattgatt ttccggatgc acacagtgga gagaaaccgg taatcacatt aggagtagtc   540
aatctttccg atcgtccata cgaacctgta ttgatgcacc ttccgcctta tctgaaaatg   600
gaaactaatc cgaccgtcct tttaaagggt aagaaaggaa ccattactct cacactcgac   660
accaaacaac taatggattt gggcttgacc cagtcttctg tttatctggc tcgttttgct   720
ggtgataaag tgggtgaaga gaacgaaata cctgtgtcag cagtccttct tccggacttt   780
tcaggaatga ccgaacagga taaggcggtc gctcctgtta ttcgcctgtc cgaatctaag   840
attgatttaa gtcaggtgct ggccaagaaa aacaaagcca gacgagacat tgttatcact   900
aatacaggta aatctcctct gcaaattagc aaactgcaag tgtttaatcc ggcagtgggg   960
gttgctttga aaaaaactgt actgcaaccg ggtgaaagta ctcggctgag ggtgactgtt 1020
ctgaaaaaga accttggaaa gaaaaagaga catttacgta tcctgatgat caccaatgat 1080
ccggtgcaac cgaaagtgga gatcgatgta aaagctacga ataacgaatc acataattaa 1140

<210> 1052
<211> 1209
<212> DNA
<213> B.fragilis

<400> 1052
ctaaggatat tccggatcat gttttggcgg tgggaaacaa atgtaaaatt attaagagta   60
tataaaatta tattattgat gaacaaacga atctggcttt cgcttgctca catgggtggc   120
cgtgagcaag actttataaa agaggctttt gatacgaact gggttgtccc tttgggacct   180
aacgtggatg cctttgagca atctttggtt gaatatttgc atgaagaccg ctatgtagtg   240
gctttgagtg ccggaacggc tgcacttcac ttgggcttga ttcttctgga tgtgaagccc   300
ggtgatgaag tgatctgcca aagctttact tttgctgcct ctgccaatcc gatttcttat   360
ctggaggcca aacctgtttt tgtggacagt gagaaggata cctggaatat ggatccggta   420
ttgctcgagg aggctataaa ggaccgttta cgcaagacgg gcaggttgcc gaaagcgatc   480
attcccgttc acctttacgg tatgcctgcc aagatggacg agatcatgga tattgcgggt   540
cgttatggta tctccgtatt ggaggatgcc gcggaggctt ggggttcgga actgaacgga   600
cggaagtgtg gcacattcgg tgaactggcc gctctctctt caatggcaa caagatgatc   660
acgacttccg ggggaggtgc tctgatctgt cgtacggaag aggaggcccg acagacaaag   720
ttctacgcta cgcaggctcg tgatgccgct ccgcattacc agcatacaca tatcggttac   780
aactatcgga tgagtaatat ttgtgcgggt atcggtcgtg ggcagatgtt tgtcctcgat   840
gaacatattg cccgtcgccg tgccattcac tctttgtatg ttgatttgct gaaagatgtg   900
gcgggtatta cggtcatgga gaaccctgat tcgcggtttg cttccaactt ttggcttact   960
tgtattctgg ttgatccgaa gcttgcgggt aagagtcgtg aggatatccg tttgaggctg 1020
gactccgaga acatagagac gcgtcctctg tggaagccga tgcatcttca gcctgtgttc 1080
acggatgctc cgttctatgg gaatggtacg agtgagaggt tgttcgatat cggcttgtgt 1140
ctgccttcgg gacctacatt gacagatgag gatatcagga gagtggtgga tacgatcaga 1200
gcgatataa   1209

<210> 1053
<211> 840
<212> DNA

<213> B.fragilis

<400> 1053
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atgcaaccat ttatggaact atcagccaat tatatcaaac gaattgaaat agacggatta    60
tgggaccgtt tcaatatagt ctgggacctt cgtccggatg tcaatatact atccggaatc   120
aatggagttg gaaaaaccac tatcctgaat cgatcggtcg ggtatctcga gcaactgtcg   180
ggtgaagtga agagtgatga aaaaaacgga gtacatatct ttttcgacaa tcccgaagct   240
acttacattc cttatgatgt tatccgtagt tacgatcgtc cgcttattat ggggggatttc  300
acagcccgta tggcagataa gaatgtaaag tccgaactcg actggcaact ctatctgttg   360
cagcgccgtt atctggatta tcaagtcaat ataggcaata agatgattga gctgttgagc   420
agcaataacg aggaagaacg tagcaaagca gccactcttt ccattgctaa acgtcgtttt   480
caagacatgg ttgacgaact attcagctat acccgtaaaa aaatagaccg tagacgcaat   540
gatattgctt tctatcagga tggtgaactt ctgtttcctt ataaactttc ttccggcgaa   600
aagcagatgt tagttattct gcttactgta cttgtacagg ataatgccca ttgcgtattg   660
ttcatggacg agcccgaagc ttctttgcat atcgaatggc agcaaaagct gatatcgatg   720
atccgtgaac tgaatccgaa tgtgcagatt atactaacga cacattctcc tgcagtgatc   780
atggaaggat ggctcgatgc tgtgaccgaa gtaagtgata ttgcaaccag ctataagtag   840
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<210> 1054
<211> 303
<212> DNA
<213> B.fragilis

<400> 1054
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gtatcacatt ctcaggaaat aaaaaagaga gtatcctttt ctggacaccc tcttccctac    60
gcatctgcgt cacatacttt actattgttt gatttcccat attataccg tttaggtaca    120
aatacaataa aagactccca cttttatacc cgatatggta taaaagtggg agcaagtcag   180
gaatctatac ccatttgggt atattgttac tcattctatc tgattacatc tatgactttc   240
ctgatatttt cattagaacc tactttctcc tatctattac atttcttttc tactccttcg   300
taa                                                                303
```

<210> 1055
<211> 234
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (92)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 1055
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gaatatgtat gggaaaataa gttggacatc gngcgtacgg catggcagta tgatccgtat   120
acgcacgaat gggtagacat gcctttggta tcgaaaggca aaaaacaatc tgaagaactt   180
ccagagcctg agtatggtga caaacaacaa tgtaagtgtc tctcagaaag gtaa          234
```

<210> 1056
<211> 1560
<212> DNA
<213> B.fragilis

<400> 1056
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acatgccttt ggtatcgaaa ggcaaaaaac aatctgaaga acttccagag cctgagtatg    60
gtgacaaaca acaatgtaag tgtctctcag aaaggtaaat atggaagtgt acgcacttca   120
ttgacccatg tgtataataa aggacagtat ccgaaccaga aactgaataa gatcacttat   180
tcggtgtcgg gtgatatgaa gtggaagaaa ttctcttttg acggaggatt gacttataat   240
aagcgctttt atcccaatga catgggagcc ggatacggtg gtagcggatt cctttataac   300
ctgttggtgt ggtcgggtgc cgaatatgat atacgcgact ataagaacta ctggatcaag   360
```

```
caggacgaac agcagaactg gatggatacc aagtggtatg acaacccctta tttcatagca    420
aatgaaattg tccgttcgag tgattacgat ttgattaacg gatatctttc tgccaactat    480
gattttactc cctggttgaa cctgtcgctg cgttcgggtc tggattcata ctcgcagaag    540
aaagagtggc ggaatgccgt cagtgccgta ggtggctggc ataaacaagg ttattatggg    600
ctgcaacgtt taggaggata cagcttaaac aatgacctga ttttgtctgc cgatcacaaa    660
ttcggtgatt ttaatgtcga tggtttttatt ggtggaaacg tttattattg gaagagtgac    720
aatatcctgg gcgaaacgca gaatggggttg aaaattccgg ggtattattc attgaagtca    780
tcgattgatc cggtgaagac aaccagcggt attaccaaaa aactggtgac cagtgtatat    840
gccaaagcct ctgtttcctg gaaaagtaca ctgtttctgg atgtgacagg acgtaatgac    900
tggtcttctt cattgccgtc ggagacacgt tcttatttct atccttctgt agccggtagt    960
gtggttcttt cacagttcat cccaatgccc gaagtgattg acttctggaa agtgaggggg    1020
gcatggacgc agaccaagag tgacttggga gtatacgata ccaacaatac ttacagtgtt    1080
tctaccgatt tgtggaacgg tgagagcgcc gcatattatc cgacatctat ccgtggtgta    1140
gcggtgaaac cctcggccac gcgttcttat gaaatcggta cggcaattca catgtttaag    1200
aatcgcctga aactggattt tacatattat aataaactct attacaactt gacccgcagt    1260
gcaggtatca gtaactcttc cggatttacg tctacattga tcaatatcga tgaagaatat    1320
gtgggacggg gagtagagtt gactttatcg ggcgatatta tcaggacgag agacctgaaa    1380
tgggagtcgt ccttcaactg gtcgcgtgac cgttggtatt ataccaaaat agacccggtg    1440
tattctacac aaaaaccttg ggtagccgtc gggaaacgtt gggactggta cggtatttac    1500
gattgggagc gtgattcaca gggaagtctt caccacgggg gtggaaggag caacgtctga    1560
```

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<210> 1057
<211> 825
<212> DNA
<213> B.fragilis
```

```
<400> 1057
cagacacgat ttgccacaga acgtatatgt ggggcgactg ggcccttccc cgatcccgac     60
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gtcggctatt ccaacatata ctccttttgc agggactttg tcagcacgcc ccgtttcctg    180
ggggctttcc cgtggctgga actggcgggc accatcgccc ccttgctggc agcctataat    240
gccaacgcgt cggcactgag cctgcatata gagagcccgc aggcctattg ggacgcggca    300
gaggacagga tcagggaaat atgcaagcgt aaggggggtgc cttattcggc cagaatgctc    360
gaggaattca aggatgaagc catggagaag ttcgcttcag gagtgaccgg cagggagaat    420
gtgggcaaat acatgcacac gaccaggttc tgggatgcgg acgccaatga cttccagggc    480
tggacgataa cccccatcga caagaaaata agggattata tcgaaagcca gatcaagatc    540
gccaacaagg ccgatgccgc ggccacatcc gggttcggac tggatccggt gctctcaaac    600
ctgatcatgg ataacaagct gtcctcaggg tcggaaaaac tgtactccat caaggtgtac    660
aatgccagtg agacggccat accggacatg atcctgtgca aaccgttgat gcactacata    720
cgggccaatt atccgggaag cagaacacag gtggggccttt accggagcgt agtggaatcc    780
gaacagagtg tatcacccgc aaacaggatg aaagaaaata tataa                     825
```

```
<210> 1058
<211> 477
<212> DNA
<213> B.fragilis
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<400> 1058
attcgaaacg ccatgaacga ggatctgata aaacaagagt ttgtccggga gaatatcgaa     60
agggatatcc gggccatttt cgaggcgcaa tacctgatcg ccaccgaaag ggtgtatacc    120
tctgccatct atccgactca ggtcggacag gggcggagcc ttgtccggga acaggggtat    180
ggacgcctgg tgcggggtac taccggccgg ctgctcagcg ccttacacaa ccccgtttac    240
agcgtcgggt tttccgggcg ggggggtggtc gccacttcca acatccccct ctatatccgc    300
ttcctggata tgaagaaaca tggaaactat ggcatctata accgccaggt atggggaatc    360
ctctggaaca attcgctcca gaccataaaa tacggatatg gcaaggaggt ccgcgaccgt    420
attttatgccg gattacagga agctttccaa agaatggaaa tacgtacgga ttcctaa      477
```

```
<210> 1059
<211> 456
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<212> DNA
<213> B.fragilis

<400> 1059
aactgttcag ctatggtaga tttacagcaa tatgaagagt attggtcggg tataacggag   60
aggattccgc aaataaagaa ggtggtgcct gtcaccttcg accccgacat gggcgctttg   120
gtccaagggc ttaaagcgga cgaactaccg gcgctgctac tcatcatccc aagcgccaaa   180
ggaaaatccc cggatgtgga caacctgttg gaattaaacc tttgcgtagc gttcctgatg   240
gacaagaccg atccgcagcg taaggggact tatcaggtgt taaaggagtt gcagcccgtc   300
atggagaaga tgaaagcgca gatgatcgat gacaaggctg cgggatgtca cctgctctcc   360
cgtctggacc tgtcgagctt atccaccatt cccgaagcgg gattttattc ggtctttgcc   420
ggatggagcc tgggatttga attcgaaacg ccatga   456

<210> 1060
<211> 402
<212> DNA
<213> B.fragilis

<400> 1060
gaagcaatga agtattttac aatcaaggaa ttaagccaca gcgatacggc cgtggcgcgc   60
gggattgaca ataccccctac gggggaggtg gttcacaacc tgacagagct ggtggaaaac   120
gtcctcgacc cgctccgtga aaagtacggg aagcccatcc gggtaagttc cggttaccgg   180
agcgctgtgc tgaacagaag cgtgaacggg gcgacctcca gccagcacct actgggtcag   240
gccgccgata ttaccgtagg cagcaaggag ggaaaccgcc ggcttttcga gatcatccgc   300
aaggaactgc ctttcgacca gctgatcgac gagaaggatt tctcctgggt gcatgtgtca   360
ttccgcacag gcaaaaacag aaaacaggta ttaaaactct aa   402

<210> 1061
<211> 2847
<212> DNA
<213> B.fragilis

<220>
<221> unsure
<222> (2724)
<223> Identity of nucleotide sequences at the above locations are unknown.

<400> 1061
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cagagcgtgg attatctgac tgactcgatc ataaccggac tgggtcgtaa atcactgctg   180
atactcgaca acttaggcct gtcggccgcg gaggtcaacg aggagatggc caaaacgggg   240
gatctgatgg cagcggtggc tgcaatcgtg gacaggcaac tcgcgcaagc gggggagaat   300
tacgtgtcgg ctgcggacaa ggccgctcaa aaagccgcgg agctgcaaaa caggcagatg   360
gaaatcggaa ggctcctgct tcccctgcaa gaaaaatgga gcggtctctt ccagtctctc   420
aagctcggtt tttcagatgt ggcgctccgg gtattggaac ataaaaaaag catcattacg   480
cttatctccg tggttaccgg ttttattctg gtttataaaa cggttattct tctgcaaaaa   540
acatggaacg ggctttttaat gctgggcaag gcggtcggcc tggcctacgc ctcggttgtg   600
gccatgcaga gaggaaacat cctcagaagc gctgccgcca tgaaaatgta taatgcctcg   660
gtggcgtcca acaacatcct ggtaaaggca tgcaccgcat ccacttatct gtttgccgcc   720
gccaaggcgg tgcttaccgg gaatatcaac aaggcccgga ttgccatgca ggcctttttat   780
gcaatcacca aaataagccc gctggccata gtggccaccg tggtcgccgc cctgacatac   840
aagctggtgt cttatcgcag ggaacttacg gcgacggaaa agcggagcg agcctgcac   900
cgggtgcggg cgcaggccgc cgacaccgta gccaccgaaa cccgggaact gaatacccctc   960
ctgggaatcg cacgcaacga gaaaataagc aaggagcagc ggatggaggc cataaaaagg 1020
ctcaacgcct taagtgagga ataccttggc ggtctcaggc tggaaacaat caacaccagg 1080
gaagccacgg ccgcagtgaa ggactacacg gacaacctgt tgtccatggc caggatacgc 1140
tcggcaaact caaggctgga ggagatccag aaagaaaaaa gggcactgga ggaacagcgt 1200
aaggatatcc atgccaaccg gaatctctgg gacagtttca aactgggggct cgccaaaggg 1260

```
ttcaattctt tgtccgtagc ggtaaagggg tattccgacg cctggtcgga gggggtcatc    1320
catgactatt ttgcaaggga attcgaccaa atacaagcct tgaaccggga agaaaagaaa    1380
cttacgcagg agatcacggc ctcacagcag gatatcatta aggtcgatac ccaatccgag    1440
gcaaaaacca aggaccttat ccaggccaaa aaggaagaga ttgcccaggc tgagcgggaa    1500
gtcgcctcga cgccggccct gctggccgcc aaaaaccgga aactccaaca gttgaacgag    1560
gagcttaaag cgttgcagca gctgggaact atccgggaaa ccccggacgg attcgcctcg    1620
cagaccgaca aggtcctctc ggccctgaat gagaggcatg aaaaggagct gctcaagatc    1680
cgggaaaaca aggagaggca gcagcagaca caggctcaat acgataaggc cgtgctggcg    1740
gaagacataa ggtttcacac ccaaaggctc gtcatcctcg aagggctgga gaaaaagacc    1800
gcccggacca aactcaggca gctggccgac atccgggcaa aaatgacgga aagctccgcc    1860
aaaatactgg agttacagcg gaaactggat gaaaacgagg ttgccctgct acaggaacag    1920
cgggataaaa aactggccat acaggaggat acgtacaagg ccaccagggc acagatagaa    1980
ttgaattatg caaacctgca tattacgcag cagcagcgcg acatgttgct gttgagcctg    2040
gaggagtcca attcccggga aagactcggt atcctgaagg aataccggaa ggatgtggaa    2100
gccctggagc tacagacggg ggatgtgaaa atacaggccg tcaaactctc cgggcaaaag    2160
gtactggagg cggagctggc caacgccaaa gacagggccg cgcagcaaaa ggcgatcgaa    2220
accatgcttt cctctttcaa aaaagagttc aacctttttca atctgccgga tgaaacggac    2280
cttcagctca aggtgctgga agcgtcatac cgggcccggc tggaactgat ccgcaatgcg    2340
ctcaaaaacg agcttgtcac aaaggatcag gccgcccggc aggaaaagga gctggaagaa    2400
gcgtacagca ccgcaaaact gaacataacc cggggtgccg aagagcgcag aaacgggatt    2460
ttggagaagt acgggctgct cggattccag caacgctatg ccatgcagat ggcggccctc    2520
aagcgggaga aggaacaggg gttgataggt gccgaagcat atgcaaaggc cgaaaagatg    2580
ctcaagatac agttctggaa agaggctttc gattattatt ccaacctgtt ttcagggget    2640
gtctctgccc tgcaaaacgc cgagatcgcg aacatggagg ccaaatatga cgccgagatc    2700
gccgcggcac agggaaacgc gcangaagtc gaacgcctga aaacggagaa agcgcagaag    2760
aagctggaga tcgagaagaa atacgccgac gtgcagtttg ccgtaaaagc caccagatca    2820
ttgcccgaca cggcgtggcc atcatga                                        2847
```

<210> 1062
<211> 951
<212> DNA
<213> B.fragilis

<400> 1062

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tatacaaata tgaaactgat atttgataaa gattcaaacg gcacgcagga actggtcgac     60
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agcatacgtc gcctgaccgc catcatagggg caggaggttt atgacaaggt tctcgacttc    180
taccaatcgg caagcgtcga tccggatggc aagctcaccc gcctgttggg aatggtgcag    240
cagtccgtag cgctgtttac ctggctgaaa atcatcccca cactggatgc gcagcatggg    300
aacacaggca ggcagaagcg cttgggggag cacgaaaaag ggctgacagc cttacaggag    360
tacaaggatg aagccaacat cctgagtcag gcctacgagt cggtagatgc cctgatagca    420
tatctggagc aggaaaagtt cgatttctgg atacaaagcc ccaaaaggaa ggctgtatcg    480
gaattgctcc tgaatagcaa ggaggcattt gattttttact atgtaaccgg cagccaccgg    540
ctgtttctga ccctggcacc catcatccgg gaggtgcaac agaggcatat catcccgata    600
atcacgtacg gccgttatga aaagctggta gcgggccagc aggtggcaga ggggttccga    660
gacgccgtct gtcggccgct ggccctgctg tccatgagca aggccgtgga acgtttgccc    720
gtggaggtcc tgcccgacgg tgtggtgcag gtgcagcttg caggaagcgt ccgtgaaaag    780
ctcagggcgg aagccgaagc gcgcaagaca gtggcaaaaa gcctggaaca agatggcatg    840
cgggatcttg ccgcgctgga ggacctggtc gcggcgctcg acgccgcacc ggatgaaccg    900
gatctgtatg taccctcgat cacccttcaa tcaaaaggca taacattctg a             951
```

<210> 1063
<211> 648
<212> DNA
<213> B.fragilis

<400> 1063

```
aatacggata tggcaaggag gtccgcgacc gtatttatgc cggattacag gaagctttcc     60
aaagaatgga aatacgtacg gattcctaaa gacacattgt cctttttgtcc gggagacggc    120
```

```
ccgcctattt ttgtccttaa aaataacgtt atgggaaaat tacaaccgga ttatatcacc      180
tggacgcttt tggtcaatgc ggacgggttg cagaaggaga tgctgaaggt gcgcaacaac      240
accaaagagc tcaaggcgga gaacgtgcgc ctgaaatcct ccatggaaaa tcttgccatg      300
cagggaaaac tccagagcaa ggagtataag gaactgaatg cgcaactcaa ggccaacaac      360
cgtaccatct cggaaaacgg ggagaagctc cgcctgctcg aaagccgtct gaacaacgcc      420
gacaaatcgt atgcccagct ctcaaaacag gccagacagc ttcgcaggga attggacaat      480
acggtaaaat cgttacaacc ccaagagtac gcccgtctgg aggcggaact ggcaaagacc      540
aaggaggcga tggagcagct aaggcccaaa acccgaggcg gtgaaagagt cattttttcag    600
ccttaccagg atgaaatccg cggtagtccg gttttttcgc cggtatag                   648
```

```
<210> 1064
<211> 795
<212> DNA
<213> B.fragilis
```

```
<400> 1064
attatggaaa tcagaagaac cggaaatacc ggatttatag ataccgggga ggggcagctt      60
atctccttcg ccatgggaaa gggatggtct ccttcttcca tcagcttcag ccgcccggag     120
agctggcaga cccgcaagat acgggtcgcg ggtgtgaata tcgtgcccat gggtgccaat     180
aacgaccttc ccggcgacgt acaacgcctg ctggataact tttacggcgg tgagggtatc     240
atgggtaaaa tacagggatt gcagtgggga gagggccccc gcttctttga ggaggccatc     300
gactccgaaa acaaccgctt ttaccgcaaa tggatactcg atgacgtcat acaggcggat     360
ctggagagtt gggattaccg cgactatatg ctccgctgcc tggtggacct ggtgcacatg     420
caagggttct gggtaaagtt catccgtaac cggggaccgc gtatcggaga ggatggaagg     480
ataatcaggc tggaacatat cccttacagg aaatgccgct tcgaatatcc cgatgacaga     540
cacgatttgc cacagaacgt atatgtgggg cgactgggcc cttccccgat cccgacaggg     600
ctgggccaaa tatcccgttt tcaatccggc ggacccgtt ccggcatccg gtatcggtcg      660
gctattccaa catatactcc ttttgcaggg actttgtcag cacgccccgt ttcctggggg     720
ctttcccgtg gctggaactg gcgggcacca tcgccccctt gctggcagcc tataatgcca     780
acgcgtcggc actga                                                       795
```

```
<210> 1065
<211> 858
<212> DNA
<213> B.fragilis
```

```
<400> 1065
accggatctg tatgtaccct cgatcaccct tcaatcaaaa ggcataacat tctgactatg      60
aaagaaatta cgtacaacaa tcaaaagaaa gagattccgg actccctgga ggagttatcc     120
cccaaggagt attaccgtta cctggagttg gtattaatga tgaacgcggg ggagatttct     180
cctttccaga tgcgctgcaa gctgctttcc tgccttctgg ggatgaagca cagccttctt     240
ctgtgcctgg gagaaataca ggaagagctt ttggcgcaac tccccgccct ggacgggttc     300
ttcgatatca cctcgcagga ggggatgatg gtttacgacg cccgcctgaa aactggccgg     360
aacctgctgc ccgcctataa ggagtggaaa ggcccggggg atatgctctc ggggattact     420
ttcggacagt ttatcgagtg catggggtg atggcggaaa tggagcgcgc ccgggagcag      480
ggaaatgaag aagatatagg ggaactgata tcttctatag gcagactgct ttataagaaa     540
cagggccctc aggaaaccgg cactcctcct ttcccggtct gcttccacgc atacatcttc     600
tttctcgcgg tctgggagct gatttacagt gtccccattt caaccaacgg gaaggacatc     660
gacttctcga tcctgttcga gaaatccggg cggggaatg cagggacaa taccggctgg       720
gtgggaatct cgtacgacgt ggccgcatcg ggtgttttcg gtgatttcag acaggtaaac     780
gacacccctt tctgggatgt gatgctatac atttataaat gcaggtttga aatgttacat     840
aacaataaga agcaatga                                                    858
```

```
<210> 1066
<211> 507
<212> DNA
<213> B.fragilis
```

```
<400> 1066
```

```
aaaggcgaat cgaaaacatt aaaaatagga aaaaagacta tggggcaatt agacaaaacg      60
gatgttgaaa tacttcaggt attacagaaa gatgcgaaag tgaacactaa agagctttct     120
gagaagctcc atatatcaaa aacgccgata tatgaacgca tcaaacgact cgaaaatgat     180
gggtatataa aaggatatgt cgctttggtg gataataaaa aagtcggatt gcctttgatt     240
gttttctgta atgtctctct ggcagttcac gacgacgaac atataaagcg cttttcaagag    300
gagatcaagg agatcgatga aattatggag tgctattcta ccggcggtat ttatgatttt     360
ttcattaagg tggtcttgaa agatctggat gcctataacc gattcgtttt tgagaaactg     420
actaaagttc acggtatagt taagatgcag agttcgtttg ttcttagtga gattaaacat     480
acgacagttt tgaatataga ccgatga                                         507
```

```
<210> 1067
<211> 648
<212> DNA
<213> B.fragilis
```

```
<400> 1067
cagctcttgt tggcccgtca ggaagtggaa aagagtacgg taatgaaact ttgtgcccgt      60
ttttatgatc cgacaaaagg gcgtatactg tttggtggag taccggtacg agagattgaa     120
cctgaaaaat tgatgagtcg tatttcgatg gttttttcagg atgtttattt atttcaggat    180
agcatacgca acaatattcg gtttggtaaa agtgatgcca cagatgaaga gattgtagca     240
gcggccaaaa aggcctgttg tcacgacttt atcatgcatc tgccacatgg ttacgataca     300
atggtgggag agggaggctg tacgttatca ggtggtgaaa aacaacggct ttccattgcg     360
cgtgccatgc tgaaagacgc acagatcgtt ctgctggacg aggcaactgc ttcgcttgat     420
cccgagaacg aagtagagat acagaaggct atcgatacgt tgattaaagg acgaacggtt     480
attgttatcg cccatcgtct caagacaata atggggggccg accacatcgt tgtcttatcc    540
gatggaaaag tggaagaaca aggtacgcat tcggaattga tgtgccggga tggtttatat    600
cggaagctct ggaacattca agaaagtaca ttgggatgga cattatag                 648
```

```
<210> 1068
<211> 423
<212> DNA
<213> B.fragilis
```

```
<400> 1068
attatatacc caaagggaat taatatcatg atacagacaa tacaagtaca aggaacagaa      60
aaacgcttat accaacttat tgctccattg gtgatgaatc cggatgtttt aagtgcaaat     120
aataattatc ctttaaaaac gacagaacaa tacgtgtggt tcattgctat cgataaaaaa     180
tcggttgttg gtttttatgcc ggtggagcat agaaggagcg gatgcgtaat caacaactat   240
tatgtcagcg gtgataaccg tgaaacactc tcattattaa tctccagtgt tttggaagca    300
atcggaaaag aagtacgttt gtttgccgtt gttatggtca accatcaggc tgtatttgag    360
gaacacgggt ttataatgga gaaggcatgg aaacgttatg taaaaatgca aaaagatgaa    420
tga                                                                   423
```

```
<210> 1069
<211> 1827
<212> DNA
<213> B.fragilis
```

```
<400> 1069
ataaatcggt tgatcatggt aaataagaag aaagaagggc tgtcccgtct gtttgagatt      60
gcaggacaga aaaaaagtct gcttctgttg gcaggcttgt tatcggctgg gagcgcggtg     120
tgtatgctca taccttattg ggcgatctac cggatactct atgaattgtt gaaccatagc     180
cgggagctgt cgtccatcga tgagaccaat atgatccgtt ggggttggat agcctttggc     240
gggctgatcg gcggattatt gttgctgtat gcttccctga tgtcatctca tgtggcagca    300
taccgtattc tctacggact gcgtatccgg ttgacggaac atatcgggag attgccgctg     360
ggttatctga acggaacatc aacgggagcc atcaagaaga cgatggaaca gaatgtagaa    420
aagatagaga acttcatagc ccacacgatt cccgatttgg tgaacgttat ggcaacagta    480
gtggtgatgt tcctcatttt cttttcgctc gatggatggc tggcaggtgt ctgtttggca    540
gtgatcgtac taagtatatt cttgcaattt tccaatttca tgggaaaaaa ggcacgggaa    600
```

```
tttacacgca tctattacaa cgcgcaagag cagatgagtg cttctgccgt gcaatatgtg    660
cgcggaatgc ctgtggtgaa aatctttgga cagagtgtcc gctcattccg tcagttcaat    720
gccgaaatcg aagcttacaa gacctatgca ttgaaagttt gcgacactta cgaatcgggt    780
atgacatatt ttaccgtact gctcaattcg attgtcacct tcattctccc tgtcggtatt    840
ttactaatgc aaaatgactc ccggagtctt acgctggcag ctgtatggct tttctttatc    900
atactcggtc cgggcgtggc ttcacccgtc tataagttga tgtatctggg cagcagtacg    960
cgggaaatca atgaaggtgt atcgcgtatt gatcgtattc ttgaaaatca gccggtctcg   1020
gaacctgctt gtccgaaaat tcccgcgacg tatgatatag agtttcgtca tgtctcgttt   1080
tcctatgaaa acaaggagca ggctactcgt accgaagcgt tgcacgatct ctgtttcacg   1140
gcccctcaag gtaaaattac cgcttttgtc ggtccgtcgg gaagtggtaa atctaccgtc   1200
gccaatctga ttccccggtt ttgggatgtg gagcagggag aaatccttat cggcaatgtg   1260
aatgtgaagg atattgcaac ggagcagtta atggatctcg tttcgttcgt ctttcaggat   1320
acattccttt tttacgatac actctatgaa aatattgccg taggttcgtc caaggcaacg   1380
agagatacgg tcattgctgc cgctcgtgct gcgcaatgcc atgagtttat cgagaagtta   1440
ccgaacggat acgaaacacg tatcggagat aaaggtgttt tcctttccgg tggtgaagca   1500
caacgagtct gtgtggcacg ggctattttg aagaatgctc ctatacttgt actggatgaa   1560
gcaacggctt ttgccgatcc cgagaacgag tacaagatgc agcaggcttt gaaatcactt   1620
attaaggata agacggtcat catcatagcc caccgccttt cttccattgt atcgtccgac   1680
cggatcatcg tactgaaaga tggaagggca gtacaatgcg gacggcatga agaactttcc   1740
tctcaagaag gggtatataa aaagatgtgg aatgcttata cgagtgcgtt ccgctggcaa   1800
ttgaatgtga aacaagaaaa agaatag                                       1827
```

<210> 1070
<211> 558
<212> DNA
<213> B.fragilis

<400> 1070
```
aaacatattg caatgagtat aaagaaaagt ccggtatata atgtaatagc agttcccgta     60
gaaaaagtac aggccaacga ttacaatccg aatgtggtgg ctcctccgga gatgaggctt    120
cttgaacttt ctatctggga agacggcttc actatgccct gcgtctgcta ttatgataag    180
gaaaaggatg tttatatcct tgtcgacggt ttccaccgtt attctgtgct gaagacttcg    240
aaacgtatct ttcagagaga aaacgggatg ttgcctattg tggtaatcga aaaggatctt    300
tccaatcgta tgagttccac tatccgccat aatcgtgccc ggggtacgca caatatagaa    360
ctgatgtgcc atattgttgc cgaacttgat aaggcaggca tgtccgatca atggattatg    420
aagaatatcg gtatggatcg ggacgagttg ttgcgcttaa agcaaatatc gggtttggcc    480
gatctgtttg ccaatcgtga cttcagtgtt cccgaagatg accagccggg aaatgtagat    540
aagaaaccta ctcgttaa                                                  558
```

<210> 1071
<211> 1014
<212> DNA
<213> B.fragilis

<400> 1071
```
agaatgagtg caataagaaa tattacaata ggccgtacgg aaaggcttta taaacctgta     60
ggctacacta tgcttgccaa tttggtgaac attgttcctt tttgcctttc tatcgaggcg    120
attcgtatta tattccgtgc tttcaacgga ggcgggcaat cgcttgatac cacccggttg    180
tggtgtatat ttggctgtat gacaggttat atagctgtta tggtactggc ggaaagggct    240
gcctatcgtg ccaatttccg tggtgcttac gaaatgagtg catcgggacg catctctttg    300
gcagaacatt tacgcaaact ttcgttaggt tttctgggta acgggatcc gggtgattta    360
tcatccatgc ttattaccga ttttacaatg gcggaaacag gtatctcgca ttatttgcct    420
caactgatgg gagcattggt gatgcctgta ctggcttttg tttcgcttct tggatcgat    480
tggcgcatgg cggtcgccat gttcgtggct cttccgtttg caatgggcat tttgtggttg    540
agcacgagcg tacaggagag gctgagtggc aggcagatca aagcaaaagt caatgccgga    600
aaccgcctgg aagagtacct gcaaggcatc cgggtgatga aagcctacaa tctgctgggt    660
gatcgttttg ttcggttgcg tgatgctttt gccgaattac gtcgtgcctg cattcggttg    720
gaggctctat tgggaccttt tgttctattg gctattacac tcgtgcgtgc aggattgaca    780
ttgatggtac tgtgcggaac atacctgctt ttaggtggcc agttgtcgat tctcacgttt    840
```

```
gtcatgttcc ttgttgtcgg ttcccgtgta ttcgacccgc tgacttccgc tcttaccaat    900
tttacagagt tccgtcattt ttctatttcg ggaggacgta ttctttctct tatgaacgaa    960
cccgaaatga aagggacaaa agaagctccc gaagacggta atatcatctt ttga         1014
```

```
<210> 1072
<211> 354
<212> DNA
<213> B.fragilis
```

```
<220>
<221> unsure
<222> (280),(285)
<223> Identity of nucleotide sequences at the above locations are unknown.
```

```
<400> 1072
tcgtggaggt atccacttga tttaggggct gtaaagctgt ctgcacagca aatgattgtg     60
cttacaccgg tcttgcgata tacagaagga gaagaacagc agctattagc tccggtagtg    120
atagccggac cccgtcgcta tcgggtgctg aaacgatctt tagctttcgg tactgacaat    180
tttgaaatgt ttcctatgct tgtcgagaat cgaaagagcg gtactcccca gactgtgaat    240
attcacttcg gattacccta tcatgaatgg atgcgccggn catanctgat tatacgtgaa    300
aggtgcccgg ttgtgccgat cgtcttgtca gtcaggatga ccataccgtt ataa         354
```

```
<210> 1073
<211> 471
<212> DNA
<213> B.fragilis
```

```
<400> 1073
ataccttttgc aggtacaaaa gtatatagaa tatatggaaa caaagattct ttcaaatgcc     60
acacacaaat gtgtttttagt gatcgataac gctcaaccta cgggcatagt agccaatatt    120
gccagtgtct tatccatgac gctaggtggc agagtcagca acattgtgag tcatgatgta    180
tatgataaac aaggtgaaag gcatttgggc ataacacaac tgccgattcc tatacttgga    240
gcttcacagg agaagataaa agagctccgg aactatttcc actctttaga aattgaagat    300
ctggtactgg ttgacttttc cactattgcc caacaatcca gaacttatga tgaatatgaa    360
cgtgaaatgt atagtgccaa tgaagatgat ctgcactatg taggtatcgg tatttgtgca    420
gagaagaaag ctataaataa agcaaccggc agcctgagtc tgatcagata a            471
```

```
<210> 1074
<211> 183
<212> DNA
<213> B.fragilis
```

```
<400> 1074
ttgataaggc agctatactt gccgttattg gcgaacatac ggatttcgcc acacgtaaaa     60
aatcggttgc aggcgttgaa tgtaggaact acctacagga tgttactgag ggactattat    120
ccgcctacac gtagtaatgt atataccatt tttaatgtgg cgagagcttt caatgtagtc    180
tag                                                                  183
```

```
<210> 1075
<211> 1305
<212> DNA
<213> B.fragilis
```

```
<400> 1075
atgatgacta aaactacaac tgtacctaaa aatgtgtatg aactggcgca agaacgtttg     60
cgtatcgtct tcaatgagtt cgataatgtc tatctttcct tttcgggagg aaaagatagc    120
ggagtgctgt tgagcttatg tattgattat attcgccgga ataacctgaa gataaaactc    180
gggggttttcc atatggatta tgagatacaa tataagatga cgattgacta tatagcccgt    240
atgttggaag acaataagga tattcttgaa gtataccggg tttgtgtacc tttcagggta    300
```

```
gctacctgta cttccatgta ccagtctttc tggcgtccgt gggaagatag taaaaaagac    360
ctctgggtgc gtccgttacc tgagaacgcc atgactaaag aagactttcc tttttataat    420
acacaaatgt gggattatga gttccaaatg cgttttgcca gttggcttca tgagaaaaag    480
gatgccgtgc gcacctgctg tctgatcggt attcgtacgc aggaaagttt caatcgttgg    540
cgctgtattt acctcaatcg caagtaccag atgtatcatc gttatcggtg gacttcgaag    600
gtaggaaacg atatctttaa tgcatatcct atatacgact ggaaaactac ggatgtatgg    660
actgctaacg gaaagtttaa gtgggattac aataaactat acgactatta ctattgggcg    720
ggagtcaatc tggaacgtca gcgcgttgcc agcccgttca taggtgaggc acaagagagt    780
ctggcacttt accgagccat cgatccgaat acgtggggga aaatgatagg ccgtgtcaat    840
ggagtgaact tcacgagtat gtatggagga acccatgcga tgggatggca gtccattaag    900
cttccggaag gatatacctg gcgggaattc atgtattttc tgctttccac tttgcccgac    960
cgtgcccgaa acggatatct ccggaagtta caggtcagtg tacaattctg gcgtaataag   1020
ggagggtgtc tgagcgacga aactattcgt aggctgaatg aagccaaggt acctattatt   1080
gtaatggaca actccaatta taaaacgacc aagaagccgg tccgcatgga atatcaggat   1140
gatattgata ttccggagtt cagggaaatc cccacctaca agcgcatgtg catctgtatt   1200
ctgaaaaatg atcatgcttg caagtatatg ggattctctc cgacaaaaga ggaaatgagt   1260
aaacgaaatc aagtaatcga acaatataaa aacatattgc aatga                    1305
```

```
<210> 1076
<211> 291
<212> DNA
<213> B.fragilis
```

```
<400> 1076
agcggaatca ataatgtttc cgccacgatg ttttcaaatt catgtttttg tttcattcta     60
tacttttatg atgttagtgt cagagtagcg ctgaaaaatg aacggtattc aaaatcgttc    120
acaaaaaaag aagagaacct tcgtaaagat tctcttctca attttaatcc ggtaaacggc    180
gatttatatt tttgtcttct attgctcata ctctcagcaa agccctccaa ccttgaattt    240
caaacaatat atactcatgc acgatatact ccatttcctt gctatcgata g            291
```

```
<210> 1077
<211> 327
<212> DNA
<213> B.fragilis
```

```
<400> 1077
aacatggaaa aaatagagat tgtattacgc cgggaacaaa ataacagaaa tggcatttat     60
ttaaattaca tcaacggata ttggtatact tacgaatggt cagccttttt gctatgtatg    120
cttcatccgg aagtcgaagt cagaaaatgt attggagtgc aacccgatga aaactatgct    180
atagcccgcg tcaataaaaa aattataaaa aaattagaaa ggaagtatca gacatccatg    240
atggatgact ccataaaaat actacttccg ccgttcaacg aagatgaaaa tatcttcctg    300
aattggaaag cgctactccc tccataa                                        327
```

```
<210> 1078
<211> 924
<212> DNA
<213> B.fragilis
```

```
<400> 1078
gtgcaaagaa aaaaaaacgg taaaatgaaa gatagtaaat taaaaacggc aggtatgcgg     60
aaacttcact ggggtaaagc ggttatgtcc atagtagtga cactggctgc tatgccgttg    120
acccatagcc tggcacgtgt cctgaaagag ggaaccacag gagtggagca gttttatgcc    180
ggaatgggaa tgggggcttt cggattattc atggtgattg cgggagtgtt tgtgaaaggg    240
catatccggc agactttatt gggattgttc ggaggaatgt tctattggat gggagctgtc    300
gactttctgt ttatgtattt tgccaaccgt ttcggtacgc aggcacaact tgatccggtg    360
acaggagagg tcgtcagccg gccggagtat ctgttactgc ctgctacctt cggtttttgg    420
gttatggtga tgatactcta tctgttctgt actcggaacg gatgcaactt cttgaactgg    480
tggcagaaat tattttttcgg caagcacaaa aaggagattg ttgtccgggc catgacgcgc    540
cacacaagta ttgtagcttt tatggaagtg atcactatgc tatggacgtg ttacctggta    600
```

```
ctgatgtttt gttatgatga acggttcttt ggcgatcacc atccggtgac actgttggtg    660
ggaatgttgg gacttatcgg ttcgattttt atgtttgcca aactgctgcg tcatgcctcg    720
tgggatatga gtttacggtt cggctttgcc accgtcatta ttttttggat agcggtagag    780
gtgtttgatc gtattcattt gttccccggt ctgtgggaaa atccgggtgg acataagcag    840
gaattgcttc ttatagcggc ttctatcatt tttacagggt ggtggcttgg atataataac    900
ctattagttt taaagaataa atga                                           924
```

```
<210> 1079
<211> 954
<212> DNA
<213> B.fragilis
```

```
<400> 1079
aatggtggtt gtttgataaa aaggaacttt ttctgtcctt tgcagtacct ccgtcacata    60
aaactttgga atgaacgcaa aatggcagat aatgtaaaag caaacaaaat gaactctcag    120
gccgacgatg acattggatt tgggatctat acggatattg cagatcttcc tatgaccggt    180
tgtccgtctt atattgaaga ggggatcggc ggtgtatgcg aatcgggtac ggcaactatc    240
gtagtttttg atgttccatt ccaaatcgta ccgaatgtgg tcattaccct gatgccgtgg    300
caactcgttt ttatcaaaga gattagtgag gatttcagga tcactttttt caaaatttcc    360
aaagatatgt tttcagaaac tctgagtaca ttatggagac ccgcttccgg gttttttgctg    420
tacatgcgca agcatattgt atcaatcccg gacggggagt tgatcggtcg ttttttggcg    480
tattgtaatc ttctggtata caggatgaag catacaccgc aaaattgtcg tcaggaatca    540
atcatgcaac tgttaagggt ttacttctgg gatgtctata ctgtgtatat caatgatcct    600
caggctgaga gagtctgaa gtttacacgt aaagacgaat atgtctatca atttgtacgt    660
ctgattatag aagatcattc tccggataaa gatgtggcct attttgcaca gaaactgggt    720
atttctccca aaaggctcac aaatcttatc cggagtatca gtggtcaatc agcgcgtgaa    780
tggattgttt attataccat tcttgagatc aagtcattgt acgggagtc atccctggac    840
attaagtcga ttgccgccag ggttaatttt cccgatcaaa cgacattgag taggtatttt    900
cgtcattata ccggagtaac gccatcccaa tacagaaaaa atatttattt ttga          954
```

```
<210> 1080
<211> 645
<212> DNA
<213> B.fragilis
```

```
<400> 1080
ttttacgtcc ggaaacaaaa cgctgttcgt catatgcaaa cactcaaatc ggatatacgc    60
aaccggattc tgtcggccgc aaaagagcaa tttgtgcaga gaggatattt gaagacctct    120
atgcgcgaaa tagccgatgc tgtagatgta ggcgtaggaa atctctataa ctattttgag    180
aataaagatg agttgttttg tgtgatactt cgtcctgtat cggatgcttt ggagcgaatg    240
ctgcaggaac atcatggagc caaaggagca gatattatgc ttatatgttc cgaagagtat    300
ctcaagtctg ctgtcgatga atatatatcc ttgataaaca agcatggtga gctgatgaag    360
attctattgt tccattcaca aggctcttca ttggaaacat tcagggaaga ctatacaaac    420
cgttcgacgg agatggttaa aacatggttt gccgaaatga aagagaagca tccggaaatc    480
aatgtggtgg tatcggattt tatgatccat ctgcaagcag tctggatgtt caccctttttt    540
gaagaaatgt tgaagcatgc tatcgatagc aaggaaatgg agtatatcgt gcatgagtat    600
atattgtttg aaattcaagg ttggagggct ttgctgagag tatga                    645
```

```
<210> 1081
<211> 867
<212> DNA
<213> B.fragilis
```

```
<400> 1081
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aagatagata accatcacca ctcgtgtatc ttatttcttt taaaagggga aatactgaca    180
tcctgcagcg agtttcacga tcagcacatc gttgaagggc acatggttct ctttcccaa     240
aacgatccta atcaaagcaa aagcatgaca gaaacagaat ttatactact gttcttcgac    300
```

```
aatcaagtca atcttcacag taaaatgtcg attgaattgt ctgccattca tcttgagtct    360
gaaaagagtt gtttttattc cttatctatc tgtcctccgc tacgacatgt gttggacagt    420
atttgcttct atctcaaaca gaaagttcag tgtagtcata tgcatgaact gaaacagaaa    480
gagatattca tggtattcgg tacattctac aatcgaacag atatggccca cttcctgatg    540
cccatcacag ggcgagatcc gaatttcaaa agtttcgtat tggaaaacta cctgcagata    600
cgaaacatca aacagtttgc acaattatat cattgttccg aacgttcttt caatcgtaaa    660
ttcaaaagct gctttcacga tactccctac aattggattc ttaatcaaaa aacacgccat    720
attaaagggc aattagccaa tcgtaatata ccgatcagtg aaatagccag aacctttcat    780
tttgcttcac cttcacattt cactacttac tgtaaaaaaa gacttggaat cactccgagc    840
gaattcagag aaaaaattgc aaaataa                                        867
```

<210> 1082
<211> 603
<212> DNA
<213> B.fragilis

<400> 1082
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aaggtgcccg gttgtgccga tcgtcttgtc agtcaggatg accataccgt tataacatcg     60
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ccgttgaagc agcgtagcga gacacataca gcctatctga attttgaggt ggacaaatat    180
gtaatgtcgc gcaattataa gaataatgcc aacgtgcttg ctgatgtcga ccggattgtc    240
aatgagatac aaaacgattc caacctgacc gtaacggaat ttcgggtgac aggctatgca    300
tctcctgaag gtgactatag ccgcaacatg gagttgtccg aaaaccgtgc attggcattt    360
gtcggttatc tgcagaatct cggaggagtt gacgaatctc tgctgacagt cgattggaaa    420
ggagaagact ggtccggcat gcgtcgtgaa gttgcggctt cgagtatgat tgataaggca    480
gctatacttg ccgttattgg cgaacatacg gatttcgcca cacgtaaaaa atcggttgca    540
ggcgttgaat gtaggaacta cctacaggat gttactgagg gactattatc cgcctacacg    600
tag                                                                  603
```

<210> 1083
<211> 594
<212> DNA
<213> B.fragilis

<400> 1083
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tcagtatata taatagaaga aacgagtatg aaaaagctaa ttctgtttgg agccgcaata     60
tcgatttcag tagctgtaag tgcacagcac gtcgctctga aaaataatct cctgtacgat    120
gctaccacca cacccaatct ggcattagag gtagggttgg ggaagaagac cacgcttgac    180
ctgtatggcg gctataatcc gtttacgttc ggaaatcaca agcgtttcaa gcactggttg    240
gcacagccgg aattccgtta ctggacctgt gagcgtttca atggaacctt ctggggtgta    300
catctgcatg gaggtgagtt tagcgtggcc ggtatcagtt tacctttcaa aatattccct    360
tctcttaaag accatcgcta tgaaggatac ttctatggag gaggtgtcag tgtgggacat    420
caatggctgt tgagtaaaca ttggagcctg gaggcctcgg tcggagtggg atatgctcat    480
tgggtatacg ataagtatcg ttgtgtgaat tgcagtccta aaataaagag tgggcataaa    540
aactatgtcg gtcctaccaa agcggctgtt tcattggtct actttattcg ctaa          594
```

<210> 1084
<211> 360
<212> DNA
<213> B.fragilis

<400> 1084
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caggttagaa ttttaataat cattaaaaaa attacgatca tgaaaaaggt attagtagca     60
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acggcagtag aaacgcaggc acaagctcca caagatgagt ttacgaaaat tgatgcccaa    180
aaacttccgg atgcagttat gaatgccttg gctaaatctt atgaaggtgc ctcaatcaaa    240
gaagtttatt cggctgacaa agagaccggt aagatttata aggtgattct tacaaccaaa    300
gattctcagg aagttaccgt acttctggac gaaaagggcg aagagataaa agaggcataa    360
```

<210> 1085
<211> 828
<212> DNA
<213> B.fragilis

<400> 1085
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gctgagcaac tggttgagaa catcgaatat gattattcca ggttcgatgg ggccaagttg   180
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gacactcaca cctgcccggt agtggtaaat gtgggttgcg gactcgatac ccgttatcag   300
cgtgtcggaa atgacggaaa ggctgtattt tatgagttgg atctaccgga ggttattgct   360
atacgtcgtc ggttgatacc cgaacctgag aatgattgtt acctgtctgc atcgttgttg   420
gaaaccgatt ggatggatcg gatccggctc cttcatccca atggagattt catctttgtt   480
gtggaaggag tattgatgta ttttcgtgag aacaggtac ggacatttct acataacata   540
accatgcgct tcgaaggtgg cgagttgtgg ttcgatgtat gcggaacgat gatgagccga   600
cgtggtgtga agcccgattc cttgagggaa cataaggcgc agatacgttc ggggatagat   660
gacgggcata tggtggagtt gtgggaaccc ggattgcatt tgttggaaca ggccaattat   720
atgaaatttt tccgttcccg ttggggattt tttttcgggc agatattggg caggatgacg   780
aagttgtgct acaagttcag ttccatgctc gggtataaaa taggataa              828
```

<210> 1086
<211> 186
<212> DNA
<213> B.fragilis

<400> 1086
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agaacgcaga tatccggact gatgggcccg ggtagcaaga ctgacataaa gcaacccata    60
gcggaaccta taaaagaaga agtgcgttgc tccggacaaa agcacctctt ttcatccatc   120
cggcacagtc cggatgtgaa gtttgcattt cacttcattc atataaatta caataaccca   180
ctataa                                                             186
```

<210> 1087
<211> 717
<212> DNA
<213> B.fragilis

<400> 1087
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atactcatgg taattatagg cgtgtttgcc caaggagata cccgccagac gctatggggc    60
tttttggag gactgctttt ttggacgggt tgggtggaat ttttatttat gtattttgcc    120
aatcgtttcg gtacacaacc tgaactggat ccggtgacgg gagaaatcgt gacccgtcct   180
gaatatctga tactgcccgc ttcttttggc ttttggatga tggtgatggt aatgtatttg   240
ttcagtacga agaatggctg caatttcatc aactggtggc agcgtttgtt attgcgcgga   300
cgaaaagccg atatagcagc acgtcccatg acacgccatg tgtcgatcat caccttatg   360
gaactgatga tgatcctgtg gacttcttat cttgtgctga tgttttgtta tgacgatgta   420
tttctcggcg aacatcatcc ggtgacactg ttagtgggat taggatgtct ggtaggagcg   480
ttctttatct ttgtcaagca attacgcatt gcctcgtggg gagcgaatat acgtatggct   540
attgctacag tggtggtgtt ctggacaccg gtggagatac tgggacgcat gaatctgttc   600
agtgagatat ggattgatcc gatgaaccac gtgatggaga tgggtattat tcttgctgtg   660
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<210> 1088
<211> 1536
<212> DNA
<213> B.fragilis

<400> 1088
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atgtcgaatt cttctattaa atcaaaaacg gcgctactcc gaaacgggga aactcaaaaa    60
ggaaatggct atccggaagc caatgattat tccgccagga ttcttgaaac catgcagacc   120
```

```
ggtgtgatct ttttcaatac cgaacaaatc atttccggca tcaacaactt ggcatgcgag    180
gatttacaga tcccccggga tccttccgga cataaaataa cagacatcat ttcaatcatc    240
caccaagaaa aagatatctt cccggaactg atcgcccgat tgaagtcttc ggaaacggat    300
atggagaaat tgccaataga cactttgata cgttctctgg aaacgaaggt gcaattcttt    360
gccagtgggt gtatcatgca gttggagacc ggacgttatt tattagcatt ccgtaatacg    420
atggatgaag taacgcatga acaccttctg agcatgattc tggcaaggac aaagatcttt    480
ccatggtttt tcgacttgaa acgtaataaa atgttaatcg atgcccactg gtttttctat    540
ctgggtatcc cggcagaaga ctgtgagata acaatcgaga agttcttctc cagagtacat    600
cccaacgaac gggatatgct tgcagatgct ttgcaaaaac agttatcaga aaaagaaata    660
cccgattcat tctcctatcg gctgcaacgg ggcgatggaa gttgggagtg gttttctgaa    720
cagtcgatgt atctcagcaa aaccaatgac ggttcacctt atcgtattgt aggcgtatgc    780
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tataaaatcg attcattcgt acagggtgcc ggtttaggac tttcagtctg caaaaccatt   1440
gtagaaggtc tgggaggtac gattaatgta tattcgcaac tgaaagaagg ttctcgtttt   1500
tccgtgatcc taccgctaaa cagactccat aaataa                             1536
```

```
<210> 1089
<211> 1455
<212> DNA
<213> B.fragilis
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<400> 1089
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gaagatcata cagaagggat caaaaaattt ggtgatattt ttggtcgtct aacaaactta    180
aatcttttta ttgcaagagt aacagatgct acttatatgg atgatgtcaa aaagggatat    240
tatcttggac aagcttatgg cttaagggca ttttattatt tcgatttata tcgtacctat    300
ggcggtgtgc ctctacgttt gactgctgat gtggtagaag gggttattga tcctaataaa    360
ctttatatgg cacgtgccac tcctaaagaa gttatggatc aaataaaaaa ggatttggat    420
aaatcaatgg aatctttтgg agataataat tcgtttgatc ctaataatcg tggaaataaa    480
aaagggtatt ggtcaaaagc tgcaaccgaa tgtttaatgg gggaggtcta tttatggatt    540
tcaaaagtgt cgacaggaga tgatgctgcc aatgaggcca atctggagat agccaaaaca    600
catttgcaaa atgtcatcaa caattacggt ctaaaaatgt tagacgattt ttcgtcagta    660
ttcgatgcca aaaatggtaa gggaaactct gaaattattt ttgctgtcag atatatggaa    720
ggcgaagctg gcaataataa caacttattc acttatgcta tggctacagg tagtacgaaa    780
gacaattatc tggctaatgg cgagaaattc ctggatgctt tgaatattgc aaatacgggc    840
agtcagcagt ggaatacaa acatgaaatt tataatagtt ttgatgtggc tgacacacgt    900
cgtgaagcca cattcattgc ttcatattct aaaaatactg aaaccaaaga gttaacttta    960
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tgtggggatt atattatttta tcgtctacct ctcgtatatt taatgcttgc cgaaattgag   1080
aatatgcagg gaggagatgt tgccaaatat attaacttag ttcgtgaacg tgcttatagc   1140
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gataaagatt tgttgggtaa tgacccttta atttaccaga ccccgggata tgcaacttat   1440
aaaaaagcag aatag                                                     1455
```

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<210> 1090
<211> 3270
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<212> DNA
<213> B.fragilis

<400> 1090
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tcaatcatcg gagcgagtgt tgtcgaggtc ggtaccacca atggtgtaat tactgacatc     180
tcaggcaaat ttacgttaat ggtcgatcct aacggaaaga tcaaagtttc ttatatcggg     240
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aacttattgg taaaggatag cggaaacgaa ttcctgttga acaaaggttg gcaacaaatg     960
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ttttattgcc agaaattaga tgtatctgta acaggccaaa acttaggata tatcacttca    3180
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<210> 1091
<211> 1629
<212> DNA
<213> B.fragilis

<400> 1091
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ggaagtgggt cttattggaa aacagaagct caggctaccg cctatataga tggtattcat   180
aagcatttac gcgatgcggc atggcaacat acaatcacat cggagaact tcgtggtgga   240
cgtttcatca ccggtgcaag tagtgatggc atgggagtta gtaatggtga tattattttg   300
caaaattttg atgaaacaca taccggagta agtaagttcg gagatttatt cggccgtatt   360
actaacttga atcttttcat agcacgcgtt acggatgcca cctatctgtc cgatgaaatg   420
aaaaacttct atttgggaga agtgtacggt ttacgtgctt tctattattt tgatctatac   480
cgcatctatg gcggggtacc tttgcgtttg acggctgatg ttgttgaagg agttattgat   540
cctaataaac tgtatatggc ccgttcgacc cccaaagaag taatgaccca aataaaaagc   600
gatttgaata aatcgatgga gtattttgga aatatgaatg attttgatcc atacaaacgt   660
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tggacttcta aagtaaccac aggagatgac gtagcaaatc ctgctgatct gactatagct   780
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ctctatggaa cacatgtacg taaaaatata ggttatgtaa atgcacaggg agcccgtgtt  1200
tactgtggtg actatatctt ctatcgcctg ccgtgggttt atcttactct tgcagaaata  1260
gcaaacatgg aaggagataa tgcagctgtt gccaaataca tcaacctggt aagaaaacgt  1320
gcctatggca atgcatggga tgaaattctg tatgcatatc cggaaacggc agattttaca  1380
actaatgaat tggctatttt gcatgagaaa gataaagaat ttatccaaga aggacaacgt  1440
tggtgggatt tacgacgtat gactttgact aaggggggaa cacctttggt tttctgcaaa  1500
gaaggaagtc ttttgggaga tgccccgata ttgaataaat ctacagaagc acataaactt  1560
ttgtggccaa ttgaaaaaac aatgttggat aaagaccccg cactggagca aacacccgga  1620
tacaaataa                                                         1629
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<210> 1092
<211> 1263
<212> DNA
<213> B.fragilis

<400> 1092
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aatttaaatc aaatgaaaaa tattttttta ataattggaa tatcactgtt ttttaatggc    60
agcctatatg ctcagtccga tgactggtct cctaagaatc ataatttaat taagtctgta   120
cgtgaggacg ggcgattctc aagttcttat ggtgtagtgc atgccatgct cagaaatact   180
gagccacgct atgcttttca tagagagttt tctcccaaag aatttcgaaa atggcaaaag   240
ggacttcgcc atgcgatgga agaaataatg aaatttcctc aaataaaaaa ctctccagct   300
cctgtctgta taaaaagaga acagcgggaa gggtatcgat tagaaaaatg ggaattttat   360
ccgcttcctg aatgcgtttc tacttttctt gttttaatac ctgataatat aaacaagccc   420
gtacctgcca ttttgtgtat tcccggttcc ggaggaaata aggagggact tgcaggtgaa   480
ccggggatag ctcccaaatt gaatgaccgg tacaaagatc cgaaactgac ccaagccctc   540
aactttgtaa aagaagggta tatagcagtg gcagtagata acccggctgc cggagaagcc   600
tcagaccttg agagatatac attgggctct aattatgatt acgatgttgt atctcgctat   660
cttttagagt tgggatggag ttatttggga tatgcttcat atttggatat gcaggttta   720
aattggatga agacccagaa gcatattcgt aaagatcgca ttgtagtaag tggatttttct   780
ctgggaaccg aacctatgat ggtattgggt acgcttgata cttcaatttta tgcttttgtt   840
tacaatgatt tcttatgtca aactcaagaa cgggcggaag taatgactat gcctgacaaa   900
aacggacgtc gtccattccc taattctata cgccatttaa tacctgattt ctggaaaaat   960
tttaattttc cggacatcgt agcggctttg gcaccccgtc ctatcatact gaccgaagga  1020
```

```
ggattagatc gagacttgga ccttgtgaga aaagcgtatg ctatagcagg cactcccgat    1080
aacgtgaaaa tatatcatta taagaagttc tcagatccgg atacacgaaa aaatgtagaa    1140
tatttacctg aaggactaga tcgtaatgaa tattttcgga tggtaaatgt agatggtccc    1200
aatcattatt ttaaatcaga actggttgta ccctggttga gaaaattatt ggaagaaaga    1260
tga                                                                  1263
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<210> 1093
<211> 1632
<212> DNA
<213> B.fragilis

<400> 1093
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aatacaagaa atatgaaaac aataaaatca ataattatat caggcatgtt actggtagta     60
tctggtggca taatgacttc atgcagtgat ttattggatt tatctccaat tgattttac    120
ggaagtggtt cttattggac tactgaagcg caagttaccg gttatatgga tggtcttcat    180
aaacatctgc gtgatgtagc cgaacagcac atcttcacct ttggagaact aaggggcgga    240
atctatagaa gtggtaatgc atctgatggt aacgcactga attacggcag tattatattg    300
cagaattttg ataggaacaa tactggtgta accggttttg gagggcatta tggacgcttg    360
gctaatatca atttgtttat tgaccgtgtg tcgaaagcag attatataga tgatgccaag    420
aagaaattct atttaggaca ggcatatggt ttacgtgctt ttatctattt tgaactttat    480
cgtatttatg gcggtgtacc tttgagactg gatgtagaag taattgatgg agtacttgat    540
cccaataaac tgtatatggc tcgtgcgacc cccaagaag taatgacgca aatcaagaaa    600
gatttggacc tttcaatgga gcattttggt aatgtaacag cttttgatcc atataatcgc    660
ggtaaaaaag tatattggtc caaagcagct actgagtgtt tgatgggaga agtctatcta    720
tggacttcta aagttactac cggtgacaat gaggccaata tcgctgactt ggcaatagcg    780
aaacaacatt tacaaagcgt cattgataat tacggtctga gcatgatgga taattttttca    840
gatgttttcg aagccaaatc ccataaaggc aacaatgaaa taatatttgc gattcgttat    900
cttgaaggag aagcgaccaa tagaaatgtc aactatacat acatgaatca gggagagata    960
gataaaggag gttttcgtga agatggaact ccatggaacg atcctttagg attaaagaaa   1020
agtggtgctc aatggtgtga gtatattcct gaactctttc aattatttga cgtggaagac   1080
actcgtcgtg atgcgacttt cctggcttct tataaaaaag ataaagatgg taatttaagt   1140
ctttggggaa ctcatgtcca aaagaatata ggttacataa attctgaagg caatcgtgtt   1200
ttttgtgggg attatgcttt ttatcgtctg ccctgggttt atctttcatt agctgagatc   1260
gctaatatgg aaagtgatca ttctggtatt gagaaatata tcaatctggt tcgtaaacgt   1320
gcttatgctt ccaattggga tgaaaataag catggatata aatcaggaga ttttactcaa   1380
aatgagttgg ctatactaca tgaaaaagat aaagaatttg ttcaagaagg gcaacgttgg   1440
tgggacgtgt tacgcatgac tctgacaaaa ggcggtaagc atttagtatt ctgtaaagaa   1500
gctaatttga aaaatgatgg agtaccaatc ttgaatgaag caacagaaag ccacaaagtt   1560
ctttggccaa tcgaacagaa tatgcttgat aaagacccct cgataaaaca aactccgggg   1620
tatgataaat aa                                                       1632
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<210> 1094
<211> 216
<212> DNA
<213> B.fragilis

<400> 1094
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gcgaaaaatg gagagaaaag aaagtttttgt gaatattttc aaacctctaa aaatcaagca     60
tttattcttt ttcttgtatt agtttttagc ctccacaaag ggcttaaaat gaatctttta    120
gaaggggata aatctagtat aaaaatcaga ctcattcatt tactaaagaa tgaattaatg    180
atattttttcc aaaatccaac agaagtgaga tgttga                             216
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<210> 1095
<211> 1332
<212> DNA
<213> B.fragilis

<400> 1095
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acaaaggata tgaagttttta caataggggag aatgaattag ctgaattaca aaggatacaa     60
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gaattatctt ttgaagagaa ctctcgtctg acagtagtta ccggaaggag aagaataggt      120
aaaacaagtc ttattatgag agcttttgaa aaaactccta ctatctattt atttgtgggg      180
agaaaaaatg aagcatcttt atgtagggaa ttcataactt tagtttccca agcacttgat      240
atttatgtgc cagaagaaat atcgactttc aaatctctct ttcggtatat tatggaagtt      300
gctaccagac agtcattcaa tttggttata gatgagtttc aagaattcta taatatcaat      360
aagtcgattt atagtgatat acaagatatc tgggatcagt atagacaaaa aactcacatg      420
aatttcgttg tgagtggttc tatttattct ttaatggaaa agattttcca taatgaaaag      480
gaacctcttt ttggccgtgc tgacaatatt ataaaacttt cagctttcag tctgaatgtt      540
ttaaagaaaa tcataaaaga ctatcatccc caatatacaa atgatgattt attggcacta      600
tactcatttt ccggtggggt tcctaaatac gttgaattat tttgtgataa cagagtatta      660
accgttgatg gaatgattga tttcatggtc agagacaact cccctttttac agatgaagga      720
aaaaatctgt taatagaaga attcggcaag aattatggta cctatttctc aatcctaagt      780
gctatctcag gtggatataa tactcagaca gaaatagaag cgttgcttgg cgaaaagagc      840
ttaggcggtt atctaaagcg attaattgaa gattataaca tagtagtgcg ccaacgtcct      900
gtctttttcaa aagagggttc tcaaactgtc agatatggga tatgcgataa ctttattcat      960
ttctggttta attatttcga tagaaatcgt tcactcattg aaataaaaaa tttcgttggc     1020
ttacgaaaat taataaaagc tgactatccg acatattcag gaaaaatcct ggaacagtat     1080
ttcaaacaaa aatatgctga aagttacgag ttccgtctta ttggttcgtg gtgggagcct     1140
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gtagcagaag tcaaacgtca aaaaaagaat ttcaagccag aacttttcca aaagaaagtg     1260
gaacacttag agaataaagt cctggctaaa tatcaaataa acacagtctg cttatcatta     1320
gaggatatgt ag                                                         1332
```

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<210> 1096
<211> 213
<212> DNA
<213> B.fragilis
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<400> 1096
tgtccctgta tcgtgctaat caaaggagtg accggaaccg taatagaaaa aacaaaatct       60
gaaccatttc acaaaatcaa agggaaagta aaattatcat tctactacca aatagaatgt      120
ttttacctat ttacgactta ttcttatttg ggaaaatttc aaaaaaggaa tattatcaca      180
tatttcttct ttcttaattt cattgtcaga tag                                   213
```

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<210> 1097
<211> 3303
<212> DNA
<213> B.fragilis
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<400> 1097
acatctttat tattaactca aaaagcaata cttatgaaga aaaccatctt cttgattttg       60
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gatgctagcg gtgaatcagt catcggagcg agtgttgtcg aggtcggtac caccaatggt      180
gtgattactg acattgacgg taagtttacg ttgtcggtcg atcctaacgg aaagatcaga      240
gtatcttata tcgggtatca gcctcaggta cttgatgtaa agggcaaaaa ttcttttaat      300
attaaattga agaagactc tgaaatgctg gaggaagttg ttgtaacggg gtatggtggc      360
aaacagctgc gtacgaaagt gacgaactct attgcaaaag taaaagatga agcattgaaa      420
gtcggcttat tctctaaccc cgctcaggca ctctccggag cagttgcagg tttaaaggtt      480
acccaagcct ctggtagccc gggtgcggct cctaaagtaa cgcttcgtgg cggtactaac      540
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gatatcaatc cggaggatat tgaatccatg gaagtcttga aggatgccgg agcaaccgct      660
atttatggtg cgcgagcaag taatggcgta atttaatta ctacaaaaac aggtaaagaa      720
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gattttttgg gagccaaaga ttatatcaac gtactgcgta caggctatag taaatccgga      840
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tctccattcg gtactggtaa tacactgaat gataaaacga tctggaatat tatgaataaa      960
acggcagaca atgcctatct gttacagaaa ggatggcaag aaatgccgga tcctctggat     1020
cccagcaaaa ccattttata taaagatact aatccggcag attataacct gaataatccg     1080
gcaatatctc aggactataa tatcaatatg tccggggggta atgataaggg tacttactat     1140
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gcaggattag gttacaaccg tcaagaggga cttcctatca agacattcta tgagcgctat    1200
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aattataacc gtgcaaattg gaaaaacatg ccgggatcac aaaccagtga aggcaattac    1320
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ctttctgtaa aaggtactgc caactggtat tactccgaat cattggctga aagtttcacc    1560
agagactatg aaaacacgcc gggtcaattt gtgagaacac gtagttcttc agcaagtttc    1620
tccagagatt tctctcagac ctataatgtg gtattaaact ataatcaaac tttcgctaaa    1680
gatcataatg tggctgttat gttgggtatg gaatattttg atagatatag ccgcagcttt    1740
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ggagaaggga aacgttccat tgattcagga catagcgatt atcgtattct ttcttatttc    1860
ggacgtctga attacgacta taaaggccgt tatttacttt ctgctgtctt ccgtcaggat    1920
ggatattcat ctttattagg tgacaaccgt tggggatttt tcccgggagt ttctgccgga    1980
tggatttttg dacaagaaaa tttcgtaaaa aatgctctgc ctttcctgtc atttggtaaa    2040
ttacgtgcga gttatggtgt aaatggtaac gcaaccggaa ttggcgccta tgacttacag    2100
ggatcttaca attctcagaa atataatgga aatgtcggct cttaatcgg tgcactaccc     2160
aacccgggtt tgaaatggga gaaaacccgt actgcagaag tcggtataga tatgagtttt    2220
tttgagaatc gcctgaacgc aaactttacc tattataatc gtttaacttc agacaagtat    2280
gccaacttaa gtttaccttc tacaacaggt ttctcgtcaa ttaagaacaa taacggaaaa    2340
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ttaattgcat ataaagccga tgggctttat cgcagttggg atgaaattcc cggagacttg    2640
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ccgcattgga ttggtggttt caacaccaca ttgcgctgga aaaacttcca actgtacgga    2880
cgctttgatt ttgcatttga ttactggatc tatgataata ctaccccttg gttcttgggt    2940
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cgtacttcca cattatttgc ttataaaggt aattatttgg ctatccgtga aatatctttg    3120
agttattctt tacctaaagc atgggcaaac aaggcttact gtcaaaaggt ggatgtgtcg    3180
atcaccggac agaatctggg atatatcaca tcggctaatg tagcttctcc tgaggtttca    3240
agtgcaggtt caggatatgc tttaccaaga accctcctgt tcggattgaa tgtaactttc    3300
taa                                                                    3303
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<210> 1098
<211> 990
<212> DNA
<213> B.fragilis

<400> 1098
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ggaatcagtg atgcttgtat cctgaccgat gaaaagaacg gtactattta tgtggcggga   120
ctctggatgt atggagtctt agatccccga tcgggtaaat gggtggaagg aatgacgcag   180
gacagtaccc gttggataca ccaatggcat gcgaaaggtt ctcagcccgg gctcggggct   240
aaagagacct gtcagttctt gattacgaaa agcgtggatg acggactgac ttggagtgac   300
cctgtaaata taacagcaca aaccaagaaa ccggaatggt ggctgtatgc tccggcaccg   360
gggcatggca ttactttgaa agacggtaca ttaatatttc ccacacaagg ccgtgataaa   420
gatggaatac cattctctaa tattacgtat agcaaggatg ggggaaaaac atggatagcc   480
tctaagccgg cttatcacaa cactacggag tgcatggcag tcgaattaca ggatggcagt   540
gttatgttga atatgcgtga taaccgtaat cacggtaata aaaaggtcaa tggacgccgt    600
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ctaaagtgca gcctggatga tggaaatacc tgggattccg gccggaaaat catgttggat   840
gagttgggaa gttttggcta ttcctgcata acttcggtca atgattctac gattggtgtt   900
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ggtaaaggta aatcatataa agagagatag                                        990


<210> 1099
<211> 747
<212> DNA
<213> B.fragilis


<400> 1099
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ggagaagtac tttatttaaa taaaccgttg ggatggacgt cttttaaagt cgtggggcac      120
gcccgttacc atatgtgccg gcggatgaaa gtgaagaaat taaaggttgg acatgcaggt      180
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gaagtggagt tgaaaccgaa attgctggtg attgatgaga tagagttgtt ggagtgtaat      540
ttaccggaaa ttaaaatacg ggtggtttgc agcaagggga cttacattcg tgcattggca      600
cgtgacatcg gagaggcttt gcaaagcggg gcgcacttga ccgggctgat acgtacccgt      660
gtgggagacg tcaagttaga gcagtgtctg gatccggcaa agttcgcgga atggatagat      720
cagcaagatg ttgagatatc tgattga                                          747


<210> 1100
<211> 429
<212> DNA
<213> B.fragilis


<400> 1100
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ctgtgcaaag ccgaaaggct gaatagtaag attctgattg agaagatgtt tgcgggcggc      120
tcaaagtcgt tttccatctt tccgttgcgt gtggtgtata tgcctgttga aaatcaagat      180
gttcaggcat ctattttact gagcgtttcg aaaaaacgat ttaaacgtgc agtaaaaaga      240
aatcgggtga aacgccagtt gcgtgaggct taccggatgc ataaacatca acttttgcag      300
attcttactg ataagcagca acagttggct attgccttta tctatctttc ggacgaatta      360
acgtcctcgg ccgaaataga ggaaaagatg aagattctac tggctcgtat tagtgagaaa      420
ctggtatga                                                              429


<210> 1101
<211> 222
<212> DNA
<213> B.fragilis


<400> 1101
attaacaata caggaagtta taccaagaaa ttcgtagtaa tcatcccttt tcctgtattt       60
aaaaaaagaa atgaagaaac tctaaacttt tggtataact tcctcttaat agttagcagg      120
tacaagaata tgtttgacta ccgtcaaaat gacagtttcc ccacttatca taaaccttgt      180
agcaacgtcc tactccgtca gaacacgtac gggagcaagt ga                        222


<210> 1102
<211> 1146
<212> DNA
<213> B.fragilis


<400> 1102
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ttggttggag cctatttcta tcaacgaaat aaggtggctg tacatcaaca ggcggagagg      120
ctattcgtac agatgcttca agaagagata gaaagaaaag aaagaaattt aaatctattt      180
catctgtttt ctgagagttc atctgatact ttacctttga aaatttgcat tatcacagaa      240
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gaggggaaaa aagagtatga ggttgattcc ctgaaaagta aaaagaacat ttctcagaac        300
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gcacctttaa taaagcaaat ttgtaaagta gaaggacaac tatatggttt acgttatgga        840
gttgtttttg atgcccagaa tagagttctt aattgtaatg caagaaaat gtctttgtcc         900
ccccaacagt gtcagattct aaagcttttt ttagatgctc ccgattatac tgtgactgat        960
gaggatatta ttaagtttat ttggaaaggt caatcgaacg ttcagataaa tacgttttgt       1020
tctgccggaa acaaattagg gaagagatta gagcaagctg gttgtggtgt ttgtttcagg       1080
cgttttggaa gcgatcgtta tcgtatgttg ttcatagacg accttgttga taatgatttg       1140
acataa                                                                  1146


<210> 1103
<211> 765
<212> DNA
<213> B.fragilis


<400> 1103
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atcaaggttg agagcgtctc tgcgaaagaa ttcagacaac agaaagtatc tattttagat        180
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ctttatattc agaagtatgt gcagtatcgt aagcgtaaga tcttctttgg tgctacgggc        360
aagatcgagg atctgattcc ttcgattgtg aaacataaaa cagaaaagta tctcgtcccg        420
atgtcggatg tacacaacga tgacgtgagg gatctgctgg ataaaaataa catccagcat        480
acggaatgcg taatgtatcg cactgttagc aatgacttta tggagggaga ggagtttgat        540
tatgatatgt tggtattctt tagtcctgcc ggagtatctt cgctgaagaa gaacttccct        600
gattttgatc agaaggacat taagatcgga acattcggat cgactacagc acaagctgtt        660
cgtgatgccg gactccgtct tgatcttgaa gcacctaacg tgaaagctcc ttcaatgacg        720
gctgccctcg atttgtttat taaggaaaac aataaggaa aataa                        765


<210> 1104
<211> 843
<212> DNA
<213> B.fragilis


<400> 1104
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caggcggtaa gtaagaccgt gaccggggcg gagggtatgc cgattcctta ttctccaaga        180
acagacgatg ggttggctat gatactgttg ggatgttttt ttgtttcagc gtatgtgttg        240
gcacgcagca agaagtttct gttgcaacag gtgaaagatt ttatgttaca tcgtgaaaga        300
acgagcattt tcgcttcttc tacggcggct gacatgcgct atttgctatt acttatcgtg        360
cagacctgcg ttcttggagg tgtttgtatt tttaactatt ttaatgatat caggcccgca        420
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tttccgtttg tttttgtttct ggtctatttt gatttgaatg tcaccttttt agtttcaatt        660
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tcctgtaata tttatggggt tttccttta attttatact tttgtgccct tgaaatcgta        780
ccttgtctga tagtgtatca aggtatgatt cagctaaata atgtttttgat aataaatttt        840
tag                                                                     843
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<210> 1105
<211> 915
<212> DNA
<213> B.fragilis

<400> 1105
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gtgtcatatt ttgatatgca gttcatcact tccagtatca gtaccacgtt ggtattgctg     120
ttactggggc ttgtggtgtt ctttgtattg gcggccaata atttgtctgt ttatgtgcgg     180
gaaaatatta atttttccgt gcttatcagt gatgatatga aggagacaga tattctgaag     240
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caggcattga aagagcagac ggaagccatg gggaccgatc cgcaagagtt tttggggtat     360
aacccgttta cggcttcaat agaaattaaa ttgcattcgg actatgcgaa ctccgacagt     420
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ttggccgtga tgttgacatt tatctctttt gcgctgatta ataatacaat ccggctggct     600
atctactcga aacgtttctt gatacatacg atgaaactgg tgggagcgag ctggggattt     660
attcgtcgtc cgttttttgaa aaggaatata tggagtgggg ttctggctgc ttttattgca     720
gatacgatcc tgatgggggc cgcttactgg ctggtatcct atgagcctga attgattcgg     780
gtaattacgc ccgaagtcat gttactggta tcgggcgcag tattggtgtt cggtgtggtc     840
atcactttct tgtgtgctta tctttctatt aataaatatc tgaggatgaa agcaagtacg     900
ctatattatg tgtaa                                                      915
```

<210> 1106
<211> 231
<212> DNA
<213> B.fragilis

<400> 1106
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aacgtatatc ttatgaaaat gaaaaactat ttgaaagtaa ctgtattttg ggtcgctgtc      60
ctttcggttt ggtgcttaaa gccgacaaaa aaatctcaag atactctctt gttgcagaat     120
gtcgaagctt tggcaagtgg agaagagcct tcacagattc attgttattg gcgaggctct     180
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<210> 1107
<211> 1314
<212> DNA
<213> B.fragilis

<400> 1107
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ttcataattc ataattttat tatgggatat ttattcacat ccgaatcggt gtctgaagga      60
caccccgata aagtggccga tcaaatatcg gacgctgtgc ttgacaaact gttggcttat     120
gatcccagtt cgaaagtagc ttgcgaaacc ttagtaacta ccggacaggt ggtgcttgcg     180
ggagaagtga aaacaggtgc ttatgttgat ttgcaactga ttgcacgtga agtgatccaa     240
aagattggtt acacgaaagg cgaatacatg ttcgaaagta attcgtgcgg tgtactttct     300
gccattcatg aacaaagtgc ggacattaac cgtggtgtag aacgcgaaga cccgatgaac     360
cagggagcag cgaccaggg tatgatgttt ggttatgcaa ccaacgaaac agaaaactat      420
atgccgttgt ctcttgacct ggcacataga atacttcttg tgttggccga tatccgccgc     480
gaaggtaaag aaatgactta tcttcgtccg gatgcaaaga gccaggtaac cattgaatat     540
gatgataacg gtactccggt acgcattgat acgattgttg tttcaacaca gcatgatgaa     600
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gcagtgatcc ggaaagatgt gattgaggtg ctgatgcctc gtgtcattgc ttctattaat     720
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aaaaagatcg atgaactgtt tgaccttcgt ccgaaggcta ttgaagaccg cctgaaactg    1140
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```
cgttatccga tttatagtga aactgctgct tacgggcata tggggcgtga acctcagatg   1200
gtgactaagc attttcaatc tcgttatgaa ggcgaccgga ctatggaagt ggaactgttt   1260
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<210> 1108
<211> 1320
<212> DNA
<213> B.fragilis

<400> 1108
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tatgtgggta ttgacccgac agccgattca ttgcatatcg gacacttatg tggtgtgatg   180
atattgcgtc acttccagcg ttgtggtcat aaaccattgg ctttgattgg tggtgcgacc   240
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ctgcgtcaca atcaggcttg tatcaaaaag caactggcta agtttttgga cttcgaatct   360
gatgctccta acagagctga actagtgaac aactatgatt ggatgaagga gttcactttc   420
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tcggtaaaga aacgtctgaa cggtgaagcc cgtgacggat tgtcgtttac tgagtttacc   540
tatcagttgt tgcaaggtta tgactttctt catctctacg aaaccaaagg atgtaaactg   600
cagatgggag gctctgatca gtggggaaat atcactaccg gtactgaact gattcgtcgt   660
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gcgttgaaaa agctggatga agatacattg ttggctgtgt cgaaggtgt tcctcaattt    1080
gagatctcac gtgatgcgtt ggtagaggga gtgaaagcgg ttgatttgtt tgtcgacaat   1140
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ttgaataaag agaaactggc tgctttttgat caggtgatta ctactgccga cttgcttgat   1260
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<210> 1109
<211> 897
<212> DNA
<213> B.fragilis

<400> 1109
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cccctgtttta atcaaatttt atttcaaatg aaaaatctta tactggtgtt aggttgtttt   60
ttctttctaa tctcatgtca gcagaccgag aaggaaaaac ttgaagaact tgttaaaaat   120
tggaatggga aggaggtact atttccgaca aatcctagtt ttacgttata tggaaaaact   180
cctgtcgatt ttaaaatccc tgtttcggat tataagatcg tgacctatgt cgattcgttg   240
ggttgttcca gctgtaaatt gcaattgcct aaatggaagg aatttatgaa atatgcggat   300
tctatagtag gctatcaaat accggttctt ttttttcttc atcctgctaa tgttcgcgag   360
atgaggtctg tgttaaaaca aaatcgtttt gattatcctg tttgtatgga tacggaagat   420
actttttaata aagtgaataa gtttccttca cagctaaatt ttcaaacttt tttattagat   480
aaaaacaatc atgtaattgc gataggaaat ccggtccata attacgatgt aagagaactc   540
tatatccatc ttatttcagg aggaatagat ggagattctc tttcaaatat gcgaacagtg   600
ataaaaatag aggaagatat ggttgatttg gggagttttg attggagacg agagcagcat   660
ataacttttg agatacacaa tattggtaat aataaatttgg tcgtttatga taataagaca   720
tcttgcggat gtacttctgt tgaatattcc aaagaacccg ttcagcccgg aaagtcttta   780
gcagttaaag taacttataa agcagaccat ccggaacact taataaaac tattatacta   840
tattgcaatg cttccgcttc tcctttggaa ttaaagataa ctggaaatgc taaataa      897
```

<210> 1110
<211> 183
<212> DNA
<213> B.fragilis

<400> 1110
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tactttctta attttcaacg tcctaaaaat ttattatcaa aacattattt agctgaatca       60
taccttgata cactatcaga caaggtacga tttcaagggc acaaaagtat aaaattaaaa      120
ggaaaacccc ataaatatta caggaaaaaa gctttaacca cttgtaaaac atcaatattt      180
tag                                                                    183
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<210> 1111
<211> 270
<212> DNA
<213> B.fragilis

<400> 1111
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attatgagta aaaagatttt tgcggccctg atagtcgctg tagtcgcaac ttttgcaggc       60
tacaatatat atcagtcaca gaaaacagag aaaatagttt cagacttggt gatagctaat      120
gtcgaagcat tggcaggcga tactgagggc ggtgctacta tcacttgctc ccgtacgtgt      180
tctgacggag taggacgttg ctacaaggtt tatgataagt ggggaaactg tcattttgac      240
ggtagtcaaa catattcttg tacctgctaa                                       270
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<210> 1112
<211> 2031
<212> DNA
<213> B.fragilis

<400> 1112
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ttattaataa aaggctctgt gatgctccgt ggtgaaaaga gttatatgaa tatgaaaatt       60
atgaaatata ttgggttagg cttgcttctg cttgtctgct catgcggggg tagagacaga      120
caagtggagg aggccttatc cctttcgggc aataaccgta atgaacttga agcggtgctg      180
aagcattatg aaggagatgg ccggaagctg gaggcggcac gcttcttgat tggcaatatg      240
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tgcagatgga cggactcgct ggctctgcag tcggttgtac ggaaggtgtc cgcacgatta     1560
ccttaccgtt ttgtaaggtt attattaccg tcggatagca ttgctttggg ggagctttct     1620
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tgggataatg gttggaagac tgtggagcgt aagcaagctg atcataaagg gtatcttgta     1920
tttgagagag tgccccgggg agcattgctg atgttgaaaa actgtcgctg gaaaggaaag     1980
acggcagagc gtatatttac ttatgaaaaa ggagatgtga agtgggaatg a              2031
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<210> 1113
<211> 279
<212> DNA
<213> B.fragilis

<400> 1113
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aagatcgtat ttaatgacat cagccgggag ctggttgata aaggcttggc cgcatacaaa   180
gaattgggaa tcgaggccag gggatatgtg tgtgacgtta ccagcgaaga gcaggtgaat   240
gctttggtag cgcagatcct cttcaccgcg gggctgcaa   279

<210> 1114
<211> 807
<212> DNA
<213> B.fragilis

<400> 1114
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ttaccggtaa gcagtagcgg gcatttggcc attggttcgg ctttatttgg tatagaagga   120
gaagaaaatc tggcatttac cattgtggtg catgtagcca ctgtgttcag tacattggtg   180
attctgtgga aagagataga ctggattttc cgtggtttat ttaagtttga gatgaacagt   240
gaaacacgct atgtaatcaa tatcttgatt tcgatgattc ctattggtat cgtcggggtg   300
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atcgtgaaga aaggtaagtt gatttacttt gctatttatt gtgcaatagt tggagtggtc   780
accattgtcg tttcacaatt gcaataa   807

<210> 1115
<211> 246
<212> DNA
<213> B.fragilis

<400> 1115
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aaactaaaaa ccgcttttac attattggtg tatattgctg tcacagtggg tatttacgcc   120
ttaatctgtc atctgaatca ccagcccttc gacgatttgc gcatactgta tgccgtactg   180
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aaatag   246

<210> 1116
<211> 258
<212> DNA
<213> B.fragilis

<400> 1116
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ggctacaata tatatcagtc acagagagta gaaagtatca tgtcggattt gacgatggcc   120
aatgtagagg cgttagctgg ttctgagatt aatgatgagg attgtgtcag tgcatctaat   180
cgttattgct ctgtttgat agtgaccca aatgggaatt atctagaaac ttattttgac   240
caaaaaacaa agtactga   258

<210> 1117

<211> 1584
<212> DNA
<213> B.fragilis

<400> 1117

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agtcccaatt atccgaaaga ttga                                         1584
```

<210> 1118
<211> 273
<212> DNA
<213> B.fragilis

<400> 1118

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gataatccgc ttacatggtg gaaagttgat tggcagctat cacggacggt caataactct   240
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<210> 1119
<211> 2079
<212> DNA
<213> B.fragilis

<400> 1119

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tcgggctctt tctacgaagg ggcaggctac taccgcaaaa cacagttctt tcctcacgac   240
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gatcgtgaaa agcgaacgac agccgttacc gtttattcca atatcggaat tccgaaagta   1860
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tttgacaatg tatcacttgc cgacggaaaa aatatactga aagctgtagt ctcaactaag   1980
gggaaggaat atactgacga gattgaatgg aattattccg gtgagaaaaa cagggaaatc   2040
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<210> 1120
<211> 240
<212> DNA
<213> B.fragilis


<400> 1120
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acggtgtttc aggcggacat tttcagtgtg agaagaatta aggtggctcc ggtggtctgt   180
ttcctgggct ttattttat gatatatggc gtgatgcgca aacccaaaac aaaagaataa   240
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<210> 1121
<211> 204
<212> DNA
<213> B.fragilis


<400> 1121
ggtgttacgg ggttgcttga tatgtatatt ttttgttttt caaatttttc tttatgcagg    60
gatggaacag acaagcggga ggaggctttg ttattttcgg gcaataaccg tgatgaattt   120
gaaacggtac tgaatgcaat ctatcttgga ggaatattgg aattagttga ctcgtacaag   180
agttcttgtt tgcgtgtgaa atga                                          204
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<210> 1122
<211> 1065
<212> DNA
<213> B.fragilis


<400> 1122
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gataggaaag agcatatagc aaatattctg tcaatgaatt ctatagatat taaaactaat   120
aggattaata aagacgaagt aattgctaga ggtgcatttc cttttgaaat gattgattca   180
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```
ttattctttc ttttcaatgg agatccttcg tctggagcat tggtttatg tgaatcgaat      240
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ggatatatag gacattgcaa tgatactatt tatgtttctg aacgttctag aacaaggcga      360
atgacttatt tactatcaaa tcataatgat agtttgcaat ataagtgtct tgaagatgtt      420
agtcctaaaa tgaattcaga attttattat cagatttgtc gtctacaaag tggtttattt      480
gtaggtgccc gtttatttgg aaaagaacat ttgtttacat tgttagacga aagtttggat      540
acacttacca cttttgcacg ggtgccgata gacattgagg aaaatgcaaa taataagctc      600
gctcctttta ttggtcattt atgtatagat gataatacgg tttattatgc ttctaatgac      660
ttttcttata tggctgctta tgatatttta tctgagaaag agataaaacc agtatttgag      720
aggatgtata tatctccaat aatccaaaaa tcagcgaatg ggatttcatt agataaatac      780
aaacatcttt tgggctttgg tgatatcagg gtttatcaga attatatttt tgcgacgtat      840
ataggaaaac ctgatataac aatggatcaa gagaatgata tttcagcttt agtccccact      900
catttgctgg ttttttaataa agatggagtt ccaattgtaa aatttaagtt tccgtttaaa      960
ataagatcat tcgtgtttac caaatccaag atgtatctat tagatgtgga ttgtaatata     1020
gaatctgtcg atttggtaga gttgtggaag catttgcccg attga                     1065
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<210> 1123
<211> 1074
<212> DNA
<213> B.fragilis

<400> 1123
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ggagagattg agcacaagat gtttaaagac atcctgaatt attttgatga taaagacgtg      180
tttgtattca acgataccaa ggtgtttcct gcacgcttat acggaaataa ggaaaaaaca      240
ggtgcgcgta tcgaagtgtt cttgttgcgc gagttgaacg aggaattgcg tttgtgggat      300
gtattggtag atccggcacg taaaatccgt atcggcaata agctttactt tggggatgat      360
gactcaatgg ttgctgaagt aattgataat actacttcac gtgggcgtac gcttcgtttt      420
ctgtatgacg gacctcatga tgaatttaaa aaagcattgt atgcattagg agaaactcca      480
ttgccacata cgattctgaa ccgtccggtt gaagaggagg atgcagaacg tttccagtct      540
atcttcgcta aaaacgaagg ggctgtgaca gcaccgactg caagtctgca cttcagccgt      600
gagctgatga aacgtatgga aattaaggga atagactttg catatatcac attgcatgca      660
ggactcggaa acttccgtga tatcgatgtg aagacctga caaagcataa aatggactct      720
gagcagatgt ttgtgacgga ggaggctgtc aagatagtga atcgtgctaa agatctgggt      780
aagaatgtat gtgccgtggg aacaactgta atgcgtgcta ttgaaagtac ggtaagtaca      840
gacggacatt tgaaggaata cgaaggatgg acgaacaagt ttatcttccc tccatacgac      900
tttactgtgg caaatgccat ggtatcaaac ttccatatgc cgctttctac gttattgatg      960
attgtggctg cttttggtgg ctacgatcag gtgatggatg catatcacat agcgttgaag     1020
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<210> 1124
<211> 852
<212> DNA
<213> B.fragilis

<400> 1124
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agctacgaca ccaagagaat tagaagagat tttctgatag aaaaggtttt ttcagccgat      120
gaagtaaaca tggtatattc catgtacgac cgtatggtgg taggtggggc catgccggta      180
aaggaagtgt tgaaattgga agctatcgat cctttgaaag ctccttattt tctgacccgt      240
cgtgaaatgg gtattttcaa tgtcgggggg tccggtatcg tgaggcgggg tgatgcgata      300
tttcagttag attataaaga ggcactttat ctgggggcag gtgaccggga cgttaccttt      360
gagagtacgg atgctgcaca tcccgctaaa ttttattttta attcactggc cgctcatcgc      420
aattatcccg ataaaaaggt gactaaagcc gatgctgtag ttgctgaaat gggaacgttg      480
gaaggttcga atcatcgtaa tatcaacaag atgctggtaa atcaggtgtt gcccacctgt      540
cagttgcaga tggggatgac cgaactggct ccgggaagtg tgtggaatac gatgcctgca      600
catgtccata gccgtcgtat ggaggcttat ttctattttg aagtaccgga agagcatgct      660
gtgtgccatt ttatgggtga ggttgacgaa acccgtcatg tgtggatgaa gggcgatcag      720
```

```
gcagtcttgt caccggagtg gtctatccat tcggctgcgg caactcacaa ttatactttt    780
atctggggta tgggaggtga gaatcttgat tatggcgacc aggacttttc attaattacg    840
gacttgaaat aa                                                         852
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<210> 1125
<211> 639
<212> DNA
<213> B.fragilis

<400> 1125
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catccgtggt atctgactcg tgaaaacctt gaccggcagt gggagatgtt gcttgcagcg    180
atacagtgtc cccaggttct ggcaataggt gaagccggtc ttgacaaatt ggttcggaca    240
gactatatgt tgcaacagga agtatttgag aaacaggcta tgcttgcaca cgaaatgaaa    300
tatccgttgg tgattcatgc agtgcgttcg cgaacgaaa ttatctgcct gagaaaaaaa    360
atgaaaccct ctaatccttg gattatacat gggttccgtg gaaagaaaga actggctttg    420
cagtacatcc gggaagggat ctatgtttca ttgggtgaga aatatcagga ggaagtgctt    480
tggggcattc ccttggaata tttattttttg gaaacggatg aaagtatgat agatattcat    540
tgcctttatg aacgtgctgc tttgctattg gagatacctc tttgcaaact tatgcaacaa    600
gtgcgtcaaa acattaataa cgtcttttttt aggcaataa                          639
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<210> 1126
<211> 231
<212> DNA
<213> B.fragilis

<400> 1126
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gcatgcattt cgcccatgac tcctccttca tgtcgtttca ctcctacttg ttcgcaatac    120
gctattgaag cgattaagaa acatggccct tttaagggac tttatcttgc tgtcagacga    180
attctccgtt gtcatccctg gggtggatca ggatacgatc cggttcctta a             231
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<210> 1127
<211> 606
<212> DNA
<213> B.fragilis

<400> 1127
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actaaaccca tgcaagaaat gaaccaaata acttccgtat gcgtatattg cgcttcaagt     60
acaaaaatag accagactta ttttgatgca gccataaaat tagggcatct gttggcaaac    120
cggcatatcc gtttgataaa tggagcgggg aatataggat tgatgcgttc ggtggctgat    180
gcagtattgc agaatggggg agaagtgacc ggagtaattc ctcattttat ggtagaccag    240
ggatggcatc acacaggatt gacagagctt atcgaggtag aaagtatgca cgagcgtaag    300
aggttgatgg ctgaaaagag tgatgccgtg attgcactgc ccggaggatg cggaactttg    360
gaagagctgc ttgagattat tacctggaaa cagttggggt tgtatcttaa cccgatcgtg    420
atattaaaca ctaatggttt ctttgacccg ttgctggaga tgcttgaaaa tgctatagaa    480
ggtaatttca tgaggaaaca gcatggagat atctggcatg tggcacatac tccggaggag    540
gctgtagagt tggtttattc cataccggtg tgggatggtt ctattcgtaa gtttgccgct    600
atatga                                                               606
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<210> 1128
<211> 1128
<212> DNA
<213> B.fragilis

<400> 1128
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actgactttt tggttagggt gttacgggtt tgcttgatat actttaaaaa tgaaatatac     60
gttagttgtt taaaaataac gaagatgaaa caaaaatata tcttatttct ttcattgtgt    120
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```
tttgtgcttt tttcatgtag gaagaacgat gttggttcgg tctattcatt tgacacagta   180
tgcaaaattg tagactataa tcttatttgt tcagatgaaa atgctccttg gggagctata   240
atgaatatgg aaatagtaga cagcatttta attctccagc atgcaatgga tgaatatgca   300
ttttcattta ttaatgtaaa taatgggggag ctattatctc aatgggggcg tacaggcgaa   360
ggaccagaag agtttataga ttttgggtct ggtttgaaa tcgttgactc gagaattgtt   420
tttctggatc gaatgaagaa agaaaggatt tcggtattat tatctgatat cttaagcaaa   480
aaagaacatc cggatataac aagggaggct tatccttata atgtggattt cagggttttg   540
gagattaatg ctgttggcaa taaaaaaata gtaacaggcg ggtttaagaa aggttattgg   600
ggagctcttg actcacagaa tcatattata cctaatgtgg cagagcttcc tttcgatgcg   660
ggtgaggtgt ccggtttaga gaagggtatc gttttcggag gtatattgaa ggcaaatagt   720
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aaatatgtgt tacctttcc tataggtaat ttctgtattg atggaactca tatctatgga  1080
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<210> 1129
<211> 3297
<212> DNA
<213> B.fragilis

<400> 1129
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gacggaacag aaatagcgtt ttgctacaaa ggagacattt ataaggtatc tgcgggagga   180
ggaacagcca tccagctcac aacacagcct tcgtatgaat gtaccccccat ttggtcaccc   240
gacagtaaac aaatagcttt tgccagtgat cgtaatggca actttgatat ttttgtaatg   300
cctgcgacag gaggtacagc acaaagactg actacccatt cttcatccga actgccttcg   360
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cggggagaag tatttgtaac ctcaactgat tatgcaacta caaagcaaat cacccataca  1080
cccgcacgcg aagccgggtt aacatttgct ccggacaatc gtacactggc ttacgcaagt  1140
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aaaaaagaga ccaaactgct tcataaaatg aatgccggat gggcttctat ggatatggac  2040
aaagatggaa aatcccctgtt tgtcctggga ggtaatgcca tgcaaaagat ggacctcagc  2100
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ggagaaaccc tgaagccgat caactataag gcagagatga aaatggacct ggctgctgaa   2160
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gatattaaag tagccaactc accggaaaca atcgtcaaag gggaagatac acaattgaaa   3240
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<211> 1773
<212> DNA
<213> B.fragilis

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ctgatcttaa acataaccca taaaactcag acaccgttaa ctttgatcca ccacctactg   360
gaagaaatca tttcggacag tctctccgaa tctacatccc aaaaagtaaa gcggatactt   420
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tttctaggct tttgtaatgc caaatatttc ggaaaacgat ttaagaaatt ctataaagtt   1740
ccacctacac aatatattaa agaggttttc taa                                1773
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<210> 1131
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<211> 1131
<212> DNA
<213> B.fragilis

<400> 1131
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agaagcactg gagataaaac cgactgtgaa gtattacatg tcgatttggt tgaacgccct   120
gttccaacag aagaattatt ttctaaaata tctgtcattc cattggaaac caatgatagt   180
tcctttcttg taaggcctgt gaaagttatt ataaaagata acagatatta tattgtcgat   240
gaaggggttc cggctgtgtt ttcttttgat gaagaagggc atcttttgca taaaataggt   300
aaaaagggac aaggtcccgg agagtatcgt gaaatatacg atgccgttat taaagaaaaa   360
gaaaatacag tgtatatgct gtctccattt ggctctcttt atgtgtattc tctggatgga   420
aaattcataa aagaaataaa actgccaact aggtcgaatt atcaattgat agaggagctg   480
gatagtaagt atttcgttac atggacatta cctgcttctg agaatgaaaa ttgtatcagc   540
gttatttcta aagagtcttt caataatgtg aaagaatttt ggcatgtccc tcccgttctc   600
actactctga attctaaacc tttttataat tatgaacata aagtatattt ttcgaatcct   660
tatcaaaatg aagtatatga agtaaggaca gatagcttac gggttgcata ccgttgggat   720
tttggaaaag ataatcttga tttgaaggag tatggattca ctttattaga ggatcaaaag   780
gttgaggaat ataaattaat gttgcagtgt ttacgtgatt ctactgtacc ttatttatta   840
aggcatcaat ttcagaataa aaaatattat tataccatgt tgacgtttgg ctttcggcat   900
cggataaatc tgttttatcg aaaggatgac ggcaagagtt tcttttttga gaaaacagcg   960
gaaggtgttt tgctccatcc tttagccttt aatgaagatt ttctgacttg tattgttttc  1020
aatgaagact ttccaaacta tgaaaaagtg cttccttcgg aggaatataa gaagctggaa  1080
gagcgtttag aagatgataa ccccctgttta atcaaatttt attttaaatg a          1131

<210> 1132
<211> 1068
<212> DNA
<213> B.fragilis

<400> 1132
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tcgcttaaga gtgataagga agttagtttta aacaaggaac tattagctcc ctatctgatg   180
tgttcttatg attccactct gtgtctaata gattggactg ccaatccgat ggtgcatgtt   240
tataacatga atacagggaa agagatggtt gcttttggga ataaaggcat gggaccggat   300
gattttctat ctatatccca aatgtatgta gatatgggca agcgttcttt ggtactgtat   360
gatcagtctt tgcaaactat aagttctttt caaattgata gtttagctca aggcagtctt   420
tcaaagatag attgtgtttc agctcctaag ttaggaatga ataggggtata tgcttattcg   480
gattccatat tttacggaag tgggactttt gaaagtggct tgatagcgaa atgcaatcag   540
aaagagattt taaatcaata tctcccttttt ccacacacag agcaagcggt aaatcgggat   600
gtaaactatt tgttgtttca gggggatctt attatgaagc cggataaaaa acgttttgct   660
tacttggcgt atgagtgcga tttattatct attcagaaag tggtaaatga cacgtgcctg   720
gaaagtgtag tacatttgaa tacgtatacg ccgttatttg agaatcaatc tactaacgaa   780
gtgtcttctg ttaatgtctc taccgattct cctaaaggat ttcttcgtgg ggtagccact   840
gaaaactatg tttatgcact ttacagtggg caaattggga aaaataaggc aatagcaaat   900
gaaatttatg tatttgattg ggaaggacgt gctgtaaaga aagtgatact ggatagatgg   960
ggtgtatgca tctcggtgga tagtaatgat gaacgactct gcctgatgac aaaggaaacg  1020
gatggtggag aagagcgtta tcattattat tgttatcagt taaactga                1068

<210> 1133
<211> 1080
<212> DNA
<213> B.fragilis

<400> 1133
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ggatgtcact cgacaaaaga gaagattgag ttttcaaaca gagtgatttg tagcgatagc   120
atatcgcgag aactggttgt tttaaatgat acgttttttat tttcgtatcc tttgcaaata   180
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gaatgtatag actcaatgct actggtattg gataatgtta ataataattt cttccatcta    240
tttactctaa agggtgtacc cataaaatca tttggagaaa aagggcaagg tcctattgac    300
tttataaatg tggaatcatt caatttatct gaagatagaa aaatcatgta tgcctacgat    360
acgtcattac gtaaaatagt gaaatatgat gtttcttctt ttttgaaaga ttcattgaaa    420
tctgaggtta tacaggtgaa ttatgatagc ttgċctcaaa ccgaagtgcc tacaataatc    480
tatgatatgc tttctcttaa agattcaaac tttctggtaa aagcaaatca taagggcctt    540
cggtttggat tattaaaaga tggaaaggtt actcaattat acaattcttt ctctgattgt    600
gtaaatacga acgatgacga agaagtctgg tcagttttct gtagcaatac caaaaccaaa    660
ttaagacctg acaggacaaa gatgttgaat gcaacctatc ttggaggagt attggaattg    720
tttgatttgg atgataattg ttccttatca ttggcaaaga tactttatat ttacgagcct    780
aaatatggta ttgccgaagg ggcaatacct aaatatgttg ttttcaatga aacgactcag    840
attggttttg aggacatata tgtaaccaat aatagtatat atacattatt acatagtata    900
gggagtgaaa ctttaccttc ggaaattact gtatttgatt gggcgggaat tccaataact    960
aaaattaaaa cagggtgctc cctctctaat attgccgtcg atgggaagga taacacaatc   1020
tatgtaattg ccgagaacga acagaatgct tatgagcttt cttgtttgtc tttaaattga   1080
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<211>  246
<212>  DNA
<213>  B.fragilis
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atcgggtatt ggcctaccac gaaaattcct aagagagtaa attccctatt tttgcaaaat    120
gtagaggcgc ttgccggcag tgaacacgtt accaatttag gttgcttggg tgacggatct    180
gtagattgtc ctattaacca tatcaaagta gaacatgtgg ttcaaggatt tagtcttggg    240
gagtga                                                                246
```

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<210>  1135
<211>  252
<212>  DNA
<213>  B.fragilis
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gccttggtcg ggtattggcc tgccgcgaaa actcctaaga gagtaaattc cttattcttg    120
caaaatgtag aggcgcttgc cggtagtgaa cacgttacca atttaggttg cttgggtgac    180
ggatctgtag attgtcctat taaccatatt aaagtagaat atgtggttca aggatttagt    240
cttggggagt ga                                                         252
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<210>  1136
<211>  1230
<212>  DNA
<213>  B.fragilis
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<400>  1136
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ttatttttat ggattttggg gatattgatg caagcatttt taattagtat gcacttctat    120
cagaggaaca tggaagcaat gtatgccgaa accgagtatc ttctgaagga agttttgaat    180
gaggaactac acagaaagca gcaagaattg aatctatttt atatctccaa agtaacaatc    240
gatactattc ctttaaagat tcgtgttaca acaagtaagg gagtcaagac ttttactgtt    300
gatgctaaaa agagtaaaaa gaatatttct caaagtatgg cagagcggtc ttggcattca    360
gctgcttgta tgaagagtcg tttgtctaca gatactttaa atttgctttg gaatagaagg    420
cttaaaagcc agcaaatttt tgctaaaacc gatgtacata taaccacaac tcatttagat    480
aatactattt cttattgtaa atgtaagaat tgcaaagatt attgttttgg aacgcataaa    540
ttcacttttt atgtgggaaa tagatgcgaa atcgaggtta tagcttttttg ctcttatttа    600
agatgggccg tatatcagta tcatagtatc ccatttgaag ttatatggag tgtgacggct    660
gttcttatca ttattctctg tagttggtat ttgataaaga agtatatatc taaaattcga    720
aatgataaaa aacatttagc taatgaccga gatcgtgaaa gaaaggttcg tatacaattg    780
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gaaaaggatc agaaaaggtt ggaggtaaaa caaaaagaat atgaaaaacg gataaaagac    840
ttttcagcaa aaggcgaaga atacgaggaa gagagaaaaa gtatggagaa aatactgaaa    900
gagtatgaga atcaaattca aaaactgaaa gaattaaggg aatctgggaa ggaaccatta    960
ctttacagat tgagtccaaa agttactttc gattcttatg caaaggtatt aatttgtagc   1020
gaccaaacaa tatctcttac ttcacaagca tgtcaactgt tggatgcttt tctgaatgct   1080
tccgagtata ttttaactta tgaggagctc ttgcgatatt tatgggaaga tggtactggg   1140
gatatgattc gtttgcgagt cgcaatttct cgtttacgtg ttgcgctaag tatagatcct   1200
gaaaatttct attttttcaga aggatattaa                                   1230


<210> 1137
<211> 1131
<212> DNA
<213> B.fragilis


<400> 1137
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aaaagcactg gagataaaac cgactgtgaa gtattacatg tcgatttggt tgaacgccct   120
gttccaacgg aagaattatt ctctaaaata tctgtcattc cattggaaac caatgatagt   180
tcctttcttg tagggcctgt aaaagttatt ataaaagata acagatatta tattgtcgat   240
gaaggggttc cggctgtgtt ttctttttgat gaagaagggc atcttttgca taaaataggt   300
aaaaagggac aaggtcccgg agagtatcgt gaaatatacg atgccgttat taaagaaaaa   360
gaaaatgcag tgtatatgct atctccattt ggctctcttt atgtgtattc tctggatgga   420
aaattcataa aagaaataaa actgccaacg agggcaaatt atcaattgat agaggagctg   480
gagagtaagt atttcgttac atggacactt cctgcctctg agaatgataa ttgtatcagc   540
gttatttcta aagagtcttc caagaatgtg aaagaatttt ggcatgttcc tcccgttctc   600
actactctga attctaaacc tttttataat tatgaacata aaatatattt ttcgaatcct   660
tatcaaaatg aagtatatga agtaaggaca gatagcttac gggttgcata ccgttgggat   720
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gttgaagaat ataaattaat gttgcagtat ttacgtgatt ctactgtgcc ttatttttta   840
tgcgatcaat atcagaatga taaattctat tatatcatgt tggtgttcgg gcttaagcat   900
tcgaaaaatc tattttatcg gaaggaagac agtaagagtt tcttttttga aaaaacaaca   960
gaaggcattc attttgaacc tttagctttt aatgaagatt tcctgacttg tattgttttc   1020
aatgaagact ttccaaacta tgaaaaagtg cttcctccgg aggaatataa gaagctggaa   1080
gagcgtttag aagatgataa cccctgttta atcaaatttt atttcaaatg a            1131


<210> 1138
<211> 198
<212> DNA
<213> B.fragilis


<400> 1138
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tactttatg atgttaatta ttttctcccc atgtctctct ttcggggagc cacctcctcc   120
gtaaaaaaag taaatgctac atttactcat tccaattatt ttttcgctat cttcgtgccg   180
ggcaacctcc tttttttaa                                                198


<210> 1139
<211> 465
<212> DNA
<213> B.fragilis


<400> 1139
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gttgccctac aaaaaataga ggagcggata gggaaaatca tttctctttc cgctttttat   120
gctactgctc cctggggatt tcagtcggaa aacaactttc tgaatgctgc ggtgggagtg   180
gagacagtat tgtcccctgt cgggatactg gaaagtactc aacggataga gcaggaaata   240
gggcgtttgc ataaatcacg ggacggtgtg tatagtgacc gcctgattga cattgatctt   300
ttgctctatg gcgataagat actacaggat gaaaggctta tagtgcctca tccgttgatg   360
accgaccgta agtttgttct ggaacccctt gccgagattg cacaggacgt tgttcatccg   420
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gtgtttcata agacgattaa agagctattt ctggctcttt cgtga   465

<210> 1140
<211> 936
<212> DNA
<213> B.fragilis

<400> 1140
cgtttcgggg tacacttaaa tatgcagata aaaccaatga ataaactcac tataaatgcc   60
tgtccgctat gtgggggcgc acatttgaaa cgtgctatga cctgtacgga tttttatgct   120
tccggtgaac agtttgactt gtacacctgc gaagattgcg gatttacttt tacgcaagga   180
gtcccggtag aggcggaaat aggcagatat tacgaaacac ctgattatat ttcccattcg   240
gacacgaaga aaggtgccat gaatgccatt taccatcatg tacgtcagta tatgcttgga   300
agaaaggcgc gtttggtgat gaaagagtct catcgaaaaa ccgggaggat actggatatc   360
ggtacaggta ccggttactt tgcccatacg atgcagaata ggggatggga agtagaggcc   420
gtggagaaga gcggacaagc ccgtaatttt gcacgcgaac atttcgggct gaatgtgagg   480
ccggaggctg cattgaaaga attagttccg ggaacgttcg atgtaatcac gttgtggcac   540
gtcatggagc acttggaaca tttggacgaa acgtgggaat tgttacgtga actgttgacc   600
gagaaagggg tattgatagt ggctgtgcct aattgctcgt cgtatgatgc gatgaaatac   660
gggaagtact gggctgctta tgatgtaccc cgtcatttat ggcattttac gcctgccacg   720
attcagcagt tcgggtcgaa gcacggattt attctggcag cccgtcatcc gatgccgttc   780
gatgctttct atgtatcgat gctgacggag aaacataaag gtagtgcata ctcctttgtg   840
aaaggcatgt ggaccggaac ggtggcatgg ttgagtgccc aggctaaaaa ggaacggagt   900
agttcgatga tttatgtatt cagaaagaaa cgctga   936

<210> 1141
<211> 234
<212> DNA
<213> B.fragilis

<400> 1141
tgggtgatgt cagtcttttg tctgcaagaa acttgtttct tgcagacaaa agactacatg   60
gataactctt ccaagcaaaa catccatagg gaaaaacacc ttgtgttttc tttcactcac   120
cgatacattt tgaacatcac tttcggcaga caccccctcg gctctacggt catacctgac   180
actcttaaag cttatactga cataatgtct gctatccaaa caagacatat ttaa   234

<210> 1142
<211> 333
<212> DNA
<213> B.fragilis

<400> 1142
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tctgaagaga atttggtaac cattgaaaaa tactctttat tccagcatct gatagacagc   120
aatggaattg tagatgaagc tgttctggaa aagctgaaac tcaatatacg ttctctgatc   180
gcaagtcagg aagaagacag taaagacctg ctcgaccttt gtatagatgt gatttatcac   240
aacaatatga aagcattcgg gttgcagcaa ctcatcaagc tctatctcac ttggttgtca   300
aagcaggaag cagaagaaga ggaggaggca tga   333

<210> 1143
<211> 453
<212> DNA
<213> B.fragilis

<400> 1143
tcatttgtag cgtactacat gaaccaattt tatataatta tgaaagcaaa aatgtttttt   60
ttagtagtag ccatgctact ttgcagaggt gtagcctatg catacagccc ttcggcgaac   120
gatccgattt caaagtcggg aggaattgag caagatattc cacctcccca tattccaccg   180
cctccgttgc cgagtcagat atttcttcat gtcggtgaaa tttccgaaac tccatatccc   240

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atgatcgggg caatggtatg ggaatgtgat aatccaccgg taggtataga acaagaagaa      300
tcatatatct ttggaactat gattatcctg cgtataaaag gagttgcagc gggaagatat      360
caagtggata tgaaatggta caatccgctc aatccgggcc agcctccatt aggaagacaa      420
accattgagg tcatcgttca gccgtggcct taa                                   453


<210> 1144
<211> 450
<212> DNA
<213> B.fragilis


<400> 1144
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caaccggaca gacagagcac ggatttattt aattatttca aatttattac tcagaaccaa      120
agaaagtcat tatctttacc gaaaatattt tctatatact cacataaaac atttggaata      180
atggcaaaga gaagagaact taaaaaaaac gtaaattata tcgcaggtga attattttca      240
gagtgtctga tcaacagtaa gtttataccg ggtaccgaca aaaagaaagc tgacgagttg      300
atggtggaaa ttatgaaaat gcaagatgaa ttcatcagtc gaatcagtca tacagaaccg      360
ggtaacgtga aaggattcta caaaaaattc cgttcggact tcaatgcaaa ggtaaatgaa      420
atcatcgacg ctatcgcgaa actgaattaa                                       450


<210> 1145
<211> 2241
<212> DNA
<213> B.fragilis


<400> 1145
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ctgttaccgg tactttttct ggcactcccc gctctggcac aagaacgtaa aaaagtcgga      120
gtggtactca gtggaggagg tgcaaaaggg gtagcacata tccaggcact gaaagtcata      180
gaagaagccg gcattccgat cgattatata gtaggtacca gtatgggatc cattatcggc      240
ggattatact ctatcggata tactcctcag caattggaca gcatggtgcg caaacaggac      300
tggatgttct tactgagcga ccgggtgaaa cgtagcgcca tgtcactcaa tgaacgtgaa      360
aagtcagaaa aatatgtttt ttcgtttccg tttaccaaaa gtcccaaaga tgcagtttca      420
ggtggcatca taaaaggaca aaatctggcc aatcttttta cggaactgac agtgggatat      480
cacgattccg tagatttcaa caaacttccc atcccctttg cctgcgtttc acaaaatatc      540
gtaaatggcg aacagattgt gttccacaat ggaatacttg ccacagctat gcgggccagt      600
atggctattc cgggagtatt caccccggta cggaaggata gtatgatcct gattgacggc      660
ggcatgatca caactaccc tgtagatgtg gccagatcga tgggtgcgga tatcatcatc      720
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ctctctcaaa tcatcgacct gacaactaaa aacaaccatc aaagcaatgt cggcctgacc      840
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atcgactccc tgatgcaccg gggagaagta gcagcccgca agcaatgggc ttctctgctc      960
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agttatacac tgaccgatac tcccgaaggt tacaaactaa acttcctgct agagaaaaag      1260
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ggagcttatt cgctgtacac agacaacttt gcccgatata acggacatgc ccccttctct      1800
gcactcagtg cttcctggga aagtgtattc tccataagta accgcctgac attgatcccg      1860
gcactttatg gcagggtatt gatcggccaa gagatccctt atgcttatga aaatgcgtta      1920
ggaggcgatg tattcggccg ttaccttcct caacaactcc cgtttgcagg aatttacaat      1980
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atagaactaa ctcacaattc cgttgccgtg gcttccttga aactacgcca acgcatgggt    2040
agcaaacatt atatcacgtt ggccggaaat ttcgccttga gtgatgacaa ttttttcaaa    2100
atcctgaaag gtaaccggat ttacggttgc agtatcggat acggcctgga cagtatgttc    2160
ggtccgttgg aagcttcatt aggatattcc aatcaatcca aagacgtggg attctacgta    2220
aatttaggat tctctttta a                                               2241
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<210> 1146
<211> 3072
<212> DNA
<213> B.fragilis
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<400> 1146
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atttcttcta cttttgcacc cgataatcat tcaaccgagc atatgaaaaa actatgtata    180
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gtgaaagagc ggctcagtaa ttactttgag acttacaccc cggcatctgc caataccgga    300
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atagaagaat tgctgcccgg cccggtacgt tttttccgaa ctacaattta tgccaacaac    480
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cggctttcaa acgcagaata taaaggagca ccttgggtga taaacacctc ccgcccttac    600
gaaataacca aaggattgca gaaccggcac atctctttgt ggcagagcca tggcaaatat    660
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tggattccta caatccccga aacagggagt tacgcagtat atgtatccta tcagacactt    1080
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<210> 1147
<211> 3075
<212> DNA
<213> B.fragilis


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gcccaattgc gttttcgccc catcttgatg acttccctcg cctttgtgct gggtatgctt      3000
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<210> 1148
<211> 777
<212> DNA
<213> B.fragilis


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<210> 1149
<211> 339
<212> DNA
<213> B.fragilis


<400> 1149
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gcttactctc tatccgacca gattctaata tccggtacag ccatcggagt tctgcaaaaa       180
gaaacggaat gcgccgaaag caacgccgac tttattcata atatagcatc gccccaaaag       240
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cagaatattc aagcatgttt gcagacgcaa atgaattaa                             339


<210> 1150
<211> 378
<212> DNA
<213> B.fragilis


<400> 1150
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tacgctaccg tttatcttat agcccgcaac gaacatcatt gccagatgat gggagtggcc       180
ggagcggaac aacgcttgaa gacgattcat gcctatcagg gtatgattcg ctttatgctt       240
gatgaagaag gactcaatgg taaggaaatc ctggacacaa tagccggaga gtatctggaa       300
gactttgtga actatcgcga acaagacttc ggaatgacca atgaagaatt tattgccatt       360
atcaaaagaa taggttga                                                   378


<210> 1151
<211> 1230
<212> DNA
<213> B.fragilis


<400> 1151
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gcaggcattt actggattct gacacgacca cataaagtag agccggaagt gccgactgtg       180
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cgtgcacaac aatttgtgga agtgcgggcc cgtgtggagg ggtatctgga aagtatgctc       300
tttgccgagg ggacgtatgt gaataaaaat caggtgcttt ttgtgatcaa tcaggatcaa       360
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ggacctgaat ttggtaataa actcgttgtg gagagaggtc tgggtgcagg tgaagaagtg      1140
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<210> 1152
<211> 2946
<212> DNA
<213> B.fragilis

<400> 1152
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atcgacgtgt tttcattttc gtccgagtat ccctatcgta ttgacttttt cggtaatgat       180
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caggcacaaa acttcggatt gagcgatctg caccagatgc gcggacgtgt gggacgtagc      2160
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<210> 1153
<211> 342
<212> DNA
<213> B.fragilis


<400> 1153
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ggaggcatga ttaccgtcga tacctgtgga atgacgaact atagcccgtt gattccggcc      180
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gctgcattcc aggatcttaa ggaatattta tcagaacaag gtatcggatt ccgtgaaata      300
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<210> 1154
<211> 1179
<212> DNA
<213> B.fragilis


<400> 1154
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ggtaaggatg ccgatattct ggtactggac gaagacctca acgtaagagc cgtatgggcc     1140
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<210> 1155
<211> 591
<212> DNA
<213> B.fragilis

<400> 1155

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gcaatcatgc ccagcggaga cattgaaaag gatatgcgtg aaataaaact ttatttcaaa   540
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<210> 1156
<211> 1383
<212> DNA
<213> B.fragilis

<400> 1156

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gatatgaaaa gaacattaat acaaaacgct accatagtaa acgaaggacg ttctgtgcgc    60
ggttcggtag ttatcgaagg ggaaaaaata gccgaagtac ttgaaaaagg acagaaacct   120
gctatccccT gcgaagaaac aatcaatgcc aacggatgct atctgattcc gggtgtgatc   180
gacgatcatg tacatttccg tgatccggga ctaacccaca aagccgacat ctctaccgaa   240
agccgggctg ccgcagctgg aggtgtaacc tctatcatgg acatgcccaa tacaaatccg   300
caaacgacca cactggatgc gctcaatgcc aagttcgatc tgcttgccga aaagtgtagc   360
gttaactatt cgtgctattt cggggcaacc aataataact ataccgagtt cgacaaactg   420
gacaagaacc gtgtatgcgg aattaagctt ttcatgggat cgagtaccgg aaatatgctg   480
gtagacaaaa tgaacagtct actgaatatt ttcaatggaa ccgatctgct gattgccgct   540
cactgcgaga atcacgaaac gattaaaaag aatacggaga agtatgtaaa agagtatatt   600
gaaaaatatc ctcatcaata ttaccatgtt catcatgaga cccttccgat gggttatcat   660
gctaaaatac gttcgattgc ggcttgttac gaatcgtccg aactggctgt acgcctggca   720
cgcattgcag atgcacgcct gcatatcctg catatctcta cagccagaga actttcactg   780
tttgacaatg atatcccgtt agaggaaaag agaatcacag cagaagcttg cgtttcacat   840
ctgttattcg actcttccga ttatccggaa ctcggtgcac gcatcaagtg taatccttct   900
atcaaaacaa aaaccaaccg ggatgcgctc cgccaggcag tcaactccaa cctgatcgat   960
gtaatcgcga cagaccatgc cccacacctt ctcaaagaaa agaaggagg gccgttgaaa  1020
gcaatgtccg gtatgcctat gatccagttc tctctggtca gcatgctcga actggtgaac  1080
gaaggtatct ttacgataga aaaggttgtc gaaagatgt gtcacgcccc tgcacaaata  1140
tacaatattc acaaccgcgg ctttatccgc cccggttatc aggccgatct cgtattggtt  1200
cgtccggatg cattatggac ggtaagcgcg gatcagattt taagcaaatg cggatggagc  1260
ccgcttgaag gacgtacgtt cgagtggaaa gtagaaaaga catttgccaa cggacatcta  1320
ttgtatactg acggacaggt agacgaaacc tatcgcggac aagagatcta ttttgaacga  1380
tga                                                                1383
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<210> 1157
<211> 789
<212> DNA
<213> B.fragilis

<400> 1157

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agaagagtga ggagtttgga actcttcact cttcttttgt ttaaacagaa aagatacaaa    60
ttatatatga aacaagaaaa attcttccgt cttcttccta tagagggagc ttataatatt   120
cgtgatctgg gaggttatcc gacatcagac cataaacatg taaaatggaa aacattcatc   180
cgttcgggcg atcttgacaa actgacagaa tccgatctgg actatcttac ctccttgcac   240
```

```
atccgaaccg acatcgactt caggagcatg caggaaaaaa aagcagcggc agacaaaatt    300
ccctcaactg ttacacaata tattcccttta tctatcgaag caggcgacat gaccgacatg    360
gcacacttca acctgaacaa tataccggga atactcgaac aggcatacgt ttatatcatc    420
caaaatgctc aggatactta tcgggaattc ttccggattg tttcggaaga acggaatact    480
cctcttttat ttcactgctc agcgggaaaa gaccgtaccg gaattgccgc agccttacta    540
ctgggagcat tgggtgtcga cagggaagtg ataatggaag attacatgct gtctgccgaa    600
tatataaaag gaaatatga tgcaatcgta caagctcatc ccggatttgc ccctctcacc    660
acagtacgga aagaatatct ggaagctgct ttccaaacca ttgacactga ctatcaaggt    720
atggataact acctgaaaaa tcaattggga gtagataccc acagattgag aatgctgtat    780
accgaataa                                                           789


<210> 1158
<211> 486
<212> DNA
<213> B.fragilis


<400> 1158
gttgaacgca tggatatatt cctgattatt ctgggtagta tctgcctgct tgtcggatta     60
gccggatgta tcgtccctat gcttcccggg cctcctgtct cctatctggc actggtattt    120
ctgcatttca ccgataaggt ttcttttacc attccacaac tattcttctg gttgttcatt    180
gtggtactga tacaaatact cgactatttc attccgatgt tcggtgtaaa aagactcgga    240
ggtaccccat ggggtaaatg gggttgcatc atcggtacct ttgccggcat tttttctgttc    300
gcccctggg gcgtatttat cggcccgttt gtgggcgcag ttgtaggcga attattgggt    360
ggaaaagaaa cgaaatacgc gctgaaagca ggattcggag catttgcagg gttcctgttg    420
ggcaccgtac tgaaggtagc tgtatgcggt tggttcatct tctgctttat ccgtgccctc    480
gtatag                                                              486


<210> 1159
<211> 792
<212> DNA
<213> B.fragilis


<400> 1159
cggaaaagca ttacatttgt cttcaaattt agacacaata tgcagacatc ggacagcatc     60
gtaatcatcc ctacctacaa cgaacgggaa aacatagaga acatcatccg cgccgtttttc    120
ggactggaaa agaccttttca tattctgatc atcgaggacg gttctcctga cgggaccgcc    180
gccattgtaa agaccttgca gcaggagttt cccgaccgcc ttttcatgat agaacgtaaa    240
ggtaaactgg gattgggaac agcctacatc accggattca gtgggcact ggaacattca    300
tacgaataca tctttgagat ggatgccgat ttcagtcata atcccaacga tctgccacgg    360
ctctatgagg cttgtgccgt tcagggaggc gatgtagcta tcggctctcg atacgtaagc    420
ggagtgaatg tagtaaattg gccgatggga cgtgtgctga tgtcttattt tgcatctaaa    480
tatgtacgaa tcgttaccgg actgccgata cacgatacga ctgccggatt taaatgttac    540
cgtcgccaag tactcgaaac catcgatctc gaccacatac gttttaaggg gtatgctttt    600
cagatagaaa tgaaatttac ggcctacaaa tgcggattca agattatcga ggtaccggtt    660
atctttatca accgcgaact gggtacttca aaaatgaaca gtagtatctt tggtgaagcg    720
gtattcggtg tcatcaaact gaaagtgaac agctggtttc acacattccc ccagaaaaca    780
aaaatgaatt aa                                                       792


<210> 1160
<211> 2070
<212> DNA
<213> B.fragilis


<400> 1160
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ttaattaata acaaacttat gaagacaaat cttagttctc agattactct caacagggtc    120
tcccccaggt attacagacc agagaatgca ttcgagagat cggtattgac ccgattagag    180
aaaattccta cagacatcta tgaatctgta gaagaaggtg caaatcatat cgcttgcgaa    240
atagcacagg ttattcgtga taaacagaaa gcaggacgtt tctgcgtact ggcattgccg    300
```

```
ggtggaaatt ctccgcgcag cgtatatgcc gaattaattc gcatgcacaa agaagaggga      360
ctcagtttcc gtaacgtaat tgtattcaac atgtacgaat actatccgtt gtctcaagat      420
gcaatcaaca gtaatttcaa tgcgttgaaa gagatgttcc tcgatcatgt agatatcgat      480
aaacagaata tctttactcc ggacggtacg attgccaaag ataccatctt tgaatactgc      540
cgcctgtacg aacagcgcat cgaaagcttc ggcggtatcg atatcgctct gctaggcatc      600
ggccgtgtag gtaatatagc cttcaacgaa ccggggtcac gcctgaactc caccacccga      660
ctgattttgc tggatagcgg ttcacgcaac gaagcatcca agatcttcgg caccatcgac      720
aacacccta tcagttctat tacgatgggt gtagccacaa ttcttgctgc taagaaaatc      780
tatttgttgg catggggtga agaaaaagcc cacatggtga aagagtgtgt agaaggtaac      840
gtaacagata ccattccggc atcttactta cagacccaca acaatgcaca tgtagctatc      900
gacctgtcag cagcttccaa cctgacacgc attcaacgtc catggctggt cacttcctgc      960
gaatggaatg acaaactgat ccgtagcgca atcgtgtggc tgtgccaatt gaccggcaaa     1020
ccaatcctga aactgaccaa taaagattac aacgaaaatg gcttgagcga gctgcttgcc     1080
ctcttcggat ctgcttataa cgtaaatatc aagatattca acgacctgca gcacaccatt     1140
accggatggc cggggggtaa accgaaagca gacgacacat atcgtccgga acgtgcaaaa     1200
ccatatccga aacgagtagt cgtattttct ccgcatcccg atgacgatgt gatctctatg     1260
ggtggtacga tccgccgcct ggtagaacag aaacatgaag tccatgtagc ttaccaaact     1320
tcgggaaaca ttgccgtagg cgatgaagaa gtagttcgct tcatgcattt catcaacgga     1380
ttcaaccaaa tctttataaa cagtgaagat caggtgatca gtgaaaagta cgccgaaatc     1440
cgtaaattcc tgaaagacaa aaaagacggc gatatggata cacgcgatat cctgaccatc     1500
aaaggtctga tccgccgtgg cgaagcgcgc acagcttgta cttacaacaa cattccgctg     1560
gaacgttgtc acttcctgga cctccccttc tacgaaaccg gtaaaatcca gaagaatccg     1620
atcagtgaag ccgacgtaga aattgtccgc aacctgctcc gtgaagtgaa gcctcatcag     1680
atctttgtag ccggtgacct tgccgacccg cacggaacac accgtgtatg tacagatgcc     1740
gtatttgctg ccgtagacct tgaaaaggaa gaaggagccg aatggttgaa agactgccgt     1800
atctggatgt atcgtggcgc atgggccgaa tgggaaattg aaaacatcga aatggctgta     1860
cctatcagtc ctgaagaatt acgtgcaaaa cgtaactcta tcctgaagca tcagtcacag     1920
atggaaagtg ctccattcct gggcaacgac gaacgcttgt tctggcagcg tagcgaggat     1980
cgtaaccgag gtactgccgc tctttacgac agcttgggac tggcttctta cgaagcaatg     2040
gaagcattcg tagaatacat cccactataa                                      2070


<210> 1161
<211> 615
<212> DNA
<213> B.fragilis


<400> 1161
tgggctaaaa ttgcatttat gacaattact gaactgcaac atcaatatgc ggggcatccg       60
aatgtagagg ccctgaataa actgttgggg gagcccgcag tcagacatat ctattgcggc      120
ggcttatatg cttccgctgc ttccttgttc gcttcggcgt tggttgaaaa gagtccttgc      180
ccgtttgttt ttatattagg tgacctggaa gaagccggtt atttttatca tgatcttacc      240
caagtgttgg gtacagagcg catttttgttt ttcccttctt cgtttcgtcg ttcggtgaag      300
tacggacaga aagatgctgc taacgagatt ttgcgtaccg aagtgctcag tcgcttgcag      360
aagggtgaag agggattgtg tatcgtcact tatcccgatg cattagccga aaaggtcgtt      420
tcacggcagg agttgagcga gaataccctg aaactgcacg tgggtgagcg ggtggatacg      480
ggtttcatta cggatgtatt gcatagttac gggtttgaat acgtggatta tgtatacgaa      540
ccggggccag tatgccgttc gtggaagtat tatcgacgtg ttttcatttt cgtccgagta      600
tccctatcgt attga                                                      615


<210> 1162
<211> 198
<212> DNA
<213> B.fragilis


<400> 1162
ttatataaaa ttggttcatg tagtacgcta caaatgatta tccgggcaca aataatcaga       60
ttagaagact ctattatgaa attagaaaaa tattatagaa cgaaaacagc cggattagag      120
gggcaaccga ataagaagaa gaataagagg atggcagaca ttgtggcagt taatgttaaa      180
tatgtcttgt ttggatag                                                   198
```

<210> 1163
<211> 1929
<212> DNA
<213> B.fragilis

<400> 1163
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ctgtatgcgg ttggttcatc ttctgcttta tccgtgccct cgtatagcga aattatccgt    60
atctttgtcc ccatgaaaga atatcgactt accgattggt tacccactac caagaaagaa   120
gtagagcttc gcggctggga cgaactggat gttatcctct ttagcggcga tgcttatgtg   180
gaccatcctt cattcggagc cgccgttatc ggtcgtatcc ttgaagccga aggcctgcgt   240
gtagccattg tgccccaacc caactggcgt gacgacttgc gtgactttcg caagctggga   300
cgtcccccgac tcttttttcgg catcagtgca ggttgcatgg actccatggt gaacaaatat   360
acagctaaca aacgcttacg tagcgatgac gcttacaccc cggacggacg tcccgatatg   420
cgaccggaat atccctcgat cgtatacacc caaattctga aaaaactcta tcccgatgtt   480
cccgttgttt tgggaggtat tgaagcaagt atgcgccgcc tcagccatta tgactattgg   540
caggatcggt taaagaaaag tatactttgt gaaagcggtg ccgacatgct gatttacggc   600
atgggagaaa agcctatttg tgagttggtc cgccgattga cagccctgtg tgataatcag   660
gatggagtga tttcatcatc cgacattcat tctccggcat tatcctctat cccgcagacg   720
gcttatctga ccaggaaata tgaatccgac gagaatgata tcaccctcta ttcgcatgaa   780
gaatgtttgg ctgataaaaa gaaacaggca accaacttcc gtcatataga agaggaaagc   840
aataaatacg cggcagcccg aatcgtacag gctgtcgatg gtaaaacagt ggttgtaaat   900
ccaccctacc ctcctatgac agagaaagag ctggaccgtt cgttcgatct cccttacact   960
cgtttgcctc atcccaaata caaaggcaaa cgcattccgg cttatgatat gattaaattt  1020
tccgttaata tccaccgggg atgttttggc ggatgcgctt tttgtaccat ctccgcccat  1080
cagggaaaat ttatagtcag ccgaagcaag gaaagcattc tgaaagaagt aaaagaggta  1140
gttcaattgc ccgatttcaa aggaaatctg agcgatttag gaggtccttc tgccaatatg  1200
tataaaatgg gcgggaaaga tctctccctt tgcaaacgtt gtaaacgccc ctcttgcatt  1260
catcccaaag tgtgtccgaa cctgaatacg gatcaccgtc cgctattgga tatttactat  1320
gcagtggact ctttacctga gatcaaacga gtttcatcg gaagtggagt gcgatacgac  1380
ttattgctcc atcaaagcaa ggatgctacc gtcaacaaaa tcacagcaga atatactcgc  1440
gaactaatag cccgccacgt cagcgggcgc ctgaaagttg caccggaaca taccagtgac  1500
cgggtactga gtatcatgcg taaacccgct ttcagccaat tcggagaatt taaaaagata  1560
ttcgacagaa tcaaccggga acttggcttg cgccaacaat tgatccctta tttcatctcc  1620
agtcatccgg gctgtaaaga agaagatatg gcggaactgg cagtcatcac caaacaactg  1680
gacttccatc tggaacaagt gcaggatttc accctaccc ctatgaccgt agccaccgaa  1740
gcttggtata caggctttca tccgtataca ctcgaaccgg tattcagtgc caagactcaa  1800
cgggaaaagt tggcacaaag acaatttttc ttttggtata aaccggaaga acgacggaat  1860
atcatcaatg aattgcgccg catcggacgg cggacctga tagacaaact atacggaaag  1920
aggaaatga                                                          1929
```

<210> 1164
<211> 677
<212> DNA
<213> B.fragilis

<400> 1164
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ttaccagtat taaaacagtc aaatatggaa aagcataacc cgtcatcatt caccgttgat    60
agctcctccc ccgctcatcg ttcatcattc gccgttcatg atttaacccc ttatatcaac   120
tggatttact tcttccacgc ctggggattc caaccgcgtt atgctgccat tgccaatatt   180
cacgatgtg actcttgccg tgctatctgg ctgaccactt tcccggaaga agaacggagc   240
aaggcttcag aagcgatgca actttataaa gaagctaacc ggatgttgaa cgaactggac   300
agaaattttg aggtaaaaac tattttttaag ctctgtcctg ccaatgcgga tggagataat   360
ctgattataa acggtatcac cttcccattg ctccggcagc aagtcaagaa gaaagaaaac   420
gaaccgttct tatgcctcag tgatttcgta cgcccgctat cttcaggcat caccgatgtg   480
gtaggagctt ttgcctcatc catcgatgcg gacatggaag gactttatga gaaagacccc   540
tataagcatc ttttggtaca aacgctatcc gaccgcctgg ccgaggccgc taccgaaaag   600
atgcacgagt acgtccgcaa agaagcctgg ggatatgcca aggatgaaaa tctttccata   660
cccgatgtct tcaacac                                                  677
```

<210> 1165
<211> 408
<212> DNA
<213> B.fragilis

<400> 1165

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gcggttggct cccgccgtca gtgtctcccc gtatcgaagg taacactcca tcggtatatc      60
cactttgcct ttatcgagga tgcagctttg cggacgatta cagaggaaca acatgccgtg     120
ggtggaaaca gcaatgcgta tcaccggatt aatgtaggca ttcttatagt tgatagcttc     180
cacagccaga ctttttccga ttacatcacc acgggtattg acgatgggga catattccgt     240
atgcgccatt acatgattaa agtaacggat acctatttga ttgagcagga tgctgagaat     300
aaatatagta ggcggcaata cgtgataaag tacaagtatg gaagtccggg tgaggggatg     360
tgctaccaaa accgtcaggc tgatgacagc aaaatggaga atacctaa               408
```

<210> 1166
<211> 792
<212> DNA
<213> B.fragilis

<400> 1166

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tcactaccat ctttaagaaa taataaaaaa aacaaaaaga tagggaggat ggtttcagcc      60
aacccctata atcgttacat ttgctttcaa attagaagat tacgatatat ggaaaccatg     120
ttcgacacct tgttgcaact ccccctttt cagggacttt gtcatgagga tttcactaat     180
atattagaaa aagtaaaact tcacttcact cgtcacaaac ccggagaacc attgataaaa     240
agtggtgagg tctgtgatca gttacttttc ttgctaaaag gcaggctctc ttccgtcacc     300
gtatcggaag acgacacgct gactgttatt gaatatttcg aagctcctgc cgtattagaa     360
ccttactcca tgtttggaat gaatacccgg tatatatctt cctatattcc gcataatgaa     420
gaagcgcaaa tggtaagtat cagtaaatcg tttgtcatgg gcgagttgtt caaatatgat     480
attttttcgtc ttaactatat gaacatcgtc agcaatcgtg cgcaaaatct ctatacacgc     540
ttatgggata aagctcccaa agacattgaa gacaaaataa tccgtttcat tttgggacac     600
attgagagaa tgacaggtga gaagctgttc aaggtaaaaa tggatgattt ggcccgcatg     660
ttggacgaca cccgcctgaa tgtatcaaaa gctctcaacg gactgcaaga attaaatttg     720
ttggaacttc accggaaaga aatccgcata cccgatttat cactcctgac agaatggaac     780
gagaaacgat aa                                                         792
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<210> 1167
<211> 1254
<212> DNA
<213> B.fragilis

<400> 1167

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ctcatttggt ttcattatga aacagatgaa ttgtacattt gcaggctgaa cctaaaaata      60
gaaccctata tgaaatataa ctttgatgaa gtgatagagc gccggggaac agactcggtg     120
aagtatgacg cagtatcgga acgttgggga cggagcgacc tgcttccgat gtgggtggcc     180
gatatggatt ccgtactcc tcctttgtg atagaggcta tccgtcggag attggatcat     240
gaagtattgg ggtatacttt cgcttgcgaa gcttggtata catccattat caattggcag     300
aaagaacgtc acgggtggaa tgttacccgg gagatgctga cgtttacgcc gggtattgtg     360
cgtggattgg cttttgccct gcaatgtttt acggctccgg gggacaaagt gatggtgatg     420
cctcctgttt atcatccttt ctttctggtg acagaacaca accacaggga ggtagtctac     480
agtccgttat tgctgaaaga cgggcaatat cagattgatt ttgaacgctt ccgtgctgat     540
gtaaagggct gtaaaatgtt gattttgagt aatcctcata tccgggagg gcgtgtctgg     600
actcgggagg agttggccga gatagcagag atttgttttg ataatcaagt attggtcatc     660
tcggatgaaa ttcatgccga tctgacattg ccgggataca cgcatcctac gtttgcattg     720
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atgccgggac ttgccagttc gtactgcatt atagaagatg aggccattcg tcatcgtttt     840
cagacttata tggaagccag tgaatttagt gaaggccatt tatttgcata tcttggagtg     900
gctgccgcgt atagcaacgg aacggagtgg ctggatcagg cattggaata tattcaggag     960
aatattgatt ttacagatga atatttaaaa acacatattc ccgcaatccg gatgattcgt    1020
```

```
cctcaagctt cttatctgat ttttctggac tgtcgcggta tgggtgtttc gcagaaagaa      1080
ttagttgact tttttgttga cggtgcacat ctggcattaa acgatggcgc tatgttcggt      1140
aaggaaggcg agggatttat gcggcttaat gtggcttgtc cgcggagtgt gttaagacag      1200
gcactggatc agataaagga ggcatacgag ttgaagcatg acacaatagc ataa           1254
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<210> 1168
<211> 2589
<212> DNA
<213> B.fragilis

<400> 1168

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acaaccagtg caattatgaa gaaaggattc aaaattacag caatcgtcat cggcgtcatt      120
ctgatactga tgtttctcct tccctttgcc ttccgtggca agattgaagg tatcgtaaaa      180
tcggaaggca acaaaatgct taacggtcat tttgatttta gtagccttga tatcagctta      240
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gaatttgaaa acgacacatt ggtgaaggcc ggtgaggtaa cagcggctat taacctgttt      360
tcgctttttg gagatgacgg atacgatgta tccaaagtat ctgttgaaaa cacccgatta      420
cacgccatcg tacttcctga cggaaaagct aactgggata tcatgaaacc cgattcatcc      480
actgccagcg aaacccaaga aagtggtgaa tcttctactt tccgaattaa actccagcgt      540
tttgtcatca aaaacatgaa tgtggtatat gacgaccggc agtccgcgat gtacgccgac      600
atacacaatt tcaatgcgct ttgttcgggt gatctgggta gcgaccagac tttactcagc      660
ctggaagccg aaactgaagc cctgacttat aaaatgaacg gtatcccttt cctctcacaa      720
gctaacgtct acgccaagat ggatgtagat gccgatctgg cacacaacaa atttacactg      780
aaaaagaacg aattccgtct gaacgccatt aaagccggca ttgacggatg gatagagttg      840
aaagaccctg ctatcgacat ggatttgaaa ctcaacacca gcgaaatagg attcaaagaa      900
atcttgtcac tgataccggc catttattcc aaagagttca agaatctgaa aacagatggt      960
acagcaactc ttgaagctac agcgaaagga atactgcaag gtgacacggt tccacagttc     1020
gatgtccgac tggctgtaaa aaacgccatg ttccgatatc catccctgcc ggcgggagtc     1080
gatcagatta acatcgacgc acaagttcgg aatccgggag gtaacattga cctgaccgag     1140
ataagcatac atcctttcag tttccgactg gcggaaaatc cgtttagtct gacagccgac     1200
ataaagacac ctgtcagcga cccggacttt acagccgaag ccaaaggggt acttaatctg     1260
ggcatgatca agcaagtcta tccgctggat gatatggagc tgaatggtac tgttcgtgcg     1320
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gcttcgggaa ccattgccct cagtgatatg aacttgaaaa tgaaagagat gccggatata     1440
gaaataaaaa aatccctgtt cacattcact ccgaaatatc tgcaactcag tgaaacgaca     1500
gtagccatcg gaaagaatga tcttactgcc gactgccggt tcgagaacta tatgggctat     1560
gctcttaaag ggggcacact gaaaggtacc ctgaatgtcc ggtcgaacca tctgaatcta     1620
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atcagcgaaa tagggaaaaa gctcgggctg gattcggcta caacggccaa caaagactcc     2520
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ataaaataa                                                            2589
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<210> 1169
<211> 1107
<212> DNA

<213> B.fragilis

<400> 1169
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tatgaacgcc tgcgtcagcg aatccatgtt tcgctgcgta tgttacgtcg gaaaagaacg   180
gtcaggaggg tagcttatta tggtgtatcc gtatgcgtca ttattgcatt aggaattgtt   240
gcttatctga atcattatga gagagtggaa cctgtgccgt ctgttgtcga aaaaaaagca   300
gagattgtct ggcaaccttt gaagtcggaa gatattcgtc tggttagcgg tgatagcata   360
acttcgttcc ggcaaaacgt gcaattgctc ttgagcaagg atggatcagc tatggtatat   420
catcctaata gcgggcagaa gcgaatcaga atggaacagg acgaggttaa tgaactggtg   480
gttccttatg gtaaacgatc gaaggttaaa ctggaagatg gaacggaaat ctggctgaat   540
tccggttcgg tacttaagtt tcctactcat ttctcgggag agaaacggga agtaagcttg   600
aagggtgaaa tgtatgccga agttacggca gatagtaaaa aaccgtttat cgtgcatacg   660
gcccattttg atatacaggt atatggaacg cgtttcaata tatcggctta tgaagatgaa   720
ccgactcctt cgtgtgtact tgtagatgga atagtcggat ccgtccgga atccggtcct    780
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aaagtgagtg cgtccagata tacttgttgg aaagaaggct atctggaatt ggatgatgcc   900
aatatcatgg atgtactgaa ccggataggg agatattata atctatcgtt tagcttcggc   960
gataagaagc ggctgaccgg taggaagtgt tcaggaaaaa tttatttatc cgataatata   1020
gataatgtat tgacaactat atcattgctg tattctactg attacaggaa agaagaacgg   1080
actattttta tatctgagaa cccataa   1107
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<210> 1170
<211> 942
<212> DNA
<213> B.fragilis

<400> 1170
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cgagacggaa cgaagggatt gggaggctgt acgtactgta ataaccaaac attcaatccc   180
gagtattgta aaacggagaa atccgtcacc cggcaacttg aggaaggaaa gcaattcttt   240
gcccataaat atccggatat gaaatatctg cttattttc aggcttatac caatacctat    300
gccgagcttg aaggactgaa agggaaatat gaagaggctt tgagtgtgga cggggtggtg   360
ggactggtca tcggcacacg tccggactgc atgcctgatc ccctgttgcg atatctggaa   420
gaactgaata agcacacttt ccttttggta gaatatggga ttgaaactac ccgggatgtt   480
actttgaaac gtatcaaccg tgggcatacc tatgccgata cggtagaaac tgtcaaccgg   540
acggctgctt gcgggattct gaccggagga cacgtcatcc tcggtcttcc gggagagacc   600
catgacgaaa ttatcgctca ggcggccgaa ttgtcccgtt tgccattgac cactcttaaa   660
atgcatcagt tgcagttgat acgtggtacg aaaatggcac gtgagtttga gtgccgcccc   720
gaggattttc atctctttag tgtggacgag tatatcgatc tggtaatcga ctatgtggaa   780
cacctgcgcc ccgatctgat acttgagcga tttgtttcac aatcaccgaa agaacttctg   840
attgcacccg attggggggct gaagaattat gaatttactg cccgcgtgca aaaaagaatg   900
aaagaaaggg gtgcttatca gggaaaggca tacctggttt ag   942
```

<210> 1171
<211> 879
<212> DNA
<213> B.fragilis

<400> 1171
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accatctgta gcagtgggcg ttgccccaac atgggcgaat gctggggaaa agggacagct   180
acgttcatga ttgccggtga catctgtacc cgcagttgta aattctgtaa tacccagacc   240
ggacgacctc tgcctttgga tcccgacgaa ccggcccacg ttgcagaatc gattgccctg   300
atgaaactct cacacgcagt tatcacatct gtagaccgcg atgatctgcc tgatttgggt   360
gcagcccatt gggcacaaac aattcgtgaa atcaaacgac taaatccgga aacaactacc   420
```

```
gaagtactga ttcccgattt ccaaggacgc aaagagctta ttgaccaagt gataaaagcc      480
tgtcccgaaa tcatctccca taacatggag actgtgaaac gcatcagtcc acaggtgcgt      540
agtgccgcca actatcacac cagcctggaa gtgatccgcc aaatagccga aagcggtatt      600
acggcaaaat cgggcattat ggttggtctg ggtgaaactc ctgctgaagt agaagagtta      660
atggacgacc tgatttccgt cggttgcaaa atcctcacca tcgggcaata tctgcagcca      720
acccacaaac acttcccggt tgcagcatac attactccgg aacagtttgc tgtttataaa      780
gaaacaggac tgaagaaagg gttcgaacaa gtggaaagcg caccattagt acgctcctcg      840
tatcatgcag aaaaacatat ccgatttaat aataagtag                           879
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<210> 1172
<211> 450
<212> DNA
<213> B.fragilis

<400> 1172

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ttaccgtcgg aggacggcaa gatgccggac tggaaatttt cttttagtct gaaacgtata      180
ccgatgatcc ggattttttga tgaaatcgag caaaaaagtg attttgtctt tgcatggtcc      240
tgcgatatcg acaacgagat tcatgaggaa atcagtattt gtgttacgga agaacccatt      300
caaaaggtaa tggaaaaggt tttgaaagga tcgggacttg tttatcagag actcgacagg      360
caaattgttg tttatcgttt gctgggacac aatgcctgta gagtagattc tgtgagagtg      420
atgactaata tggaacagaa tgatcgatag                                      450
```

<210> 1173
<211> 1095
<212> DNA
<213> B.fragilis

<400> 1173

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gtctgcgtgc aatggctact tacgaaaagg ggctggacga atataaagac gaaaacggta      60
atatcattta cggttaaggt aatgaaaata cggaaagacg atattcttct tattttgctg      120
agtctgcttt tcgcagactg ccgggtgggg aaagcggaac ctgtggcgga ccctatggaa      180
gaagagggaa tttccgtagt cagatatgat aagctgttgg acgaatacgt tcgtttcaac      240
agcttttctg ctttacaaaa aatgaacctg gagtatgcct tgcccaccaa actgttgatt      300
gaagatgtat tggctattgg ccaggtgagc gatgaccata ttttccagcg attgaaaact      360
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gatatcatga ttcctatgat atatacgcag atctcggcat tcaatgaatc cattgttctg      540
tctgacagcg tgttgggtat tagtcttgac aagtatatgg gtgaagacta tccgctttac      600
aagcgtttct attacaacta tcagcggcgt actatgcgtc ctgaccggat cgtccccgat      660
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tcgatggtag gtacctggat cggtacgaaa atcatcactt cgtatatgaa acatcataag     1020
aaaacaactt tacggcaatt gcttgaaatg agcgactatg aacgtatgtt cacggaatcg     1080
cgttttaatc cgtaa                                                    1095
```

<210> 1174
<211> 258
<212> DNA
<213> B.fragilis

<400> 1174

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ttccattgct ttctcacctt ttttagcagc cttttgcgca ccttcttta cgtctttggc      180
```

```
tgcatctttg gctgtatctt tgactttctc aaatgcatct ttggtgcttt ctttcacgtc    240
atctcctatt ttctttaa                                                   258
```

<210> 1175
<211> 2712
<212> DNA
<213> B.fragilis

<400> 1175
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gcagatacgt atgaaaaaca cgaagttgcc agtattcagc agcaaaaggt aaaagcgaac    180
ggtactgtag tagatcagac cggcgaacct ctaatcggcg tttctgtaaa agtaaaagac    240
gcgcctaatg gaacaatcac caatttagat ggtaaattct ccatcgatgt agccaaaggt    300
gctacacttg aaatatccta tgtgggatat aaaacggtca ttgtaaaagc cgaatcaacc    360
ccaatgcaca ttgtcttaaa agaagatagt gaaatgatag atgaggtagt ggtagttggt    420
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<210> 1176
<211> 732
<212> DNA

<213> B.fragilis

<400> 1176
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accttgtttg gtattttggt ttcctggcaa atgttactga ttcttttagg aatttacttg     180
attttgcggc gtcagatttt gcggggcggg atactgcttg ctatcggtgc ctatctgatc     240
agtccgtatt tggaatggat gcctgcagga gttcatgtca ctcttttccc gattgtcctg     300
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gtagtgtttc ggtgtactac ctgtctgggc ggttgtcagg acaaacgttt tggcgggggt     660
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<210> 1177
<211> 825
<212> DNA
<213> B.fragilis

<400> 1177
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aaaaaaggaa tcgtatcgtt ccagaatgtt gttactttca acatggacga atacgtagga     240
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atcgtttgcg atgatgctgc tactgccgaa ctgaaagttg gtacttatcg ttatttcaag     780
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<210> 1178
<211> 963
<212> DNA
<213> B.fragilis

<400> 1178
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taa                                                                    963


<210> 1179
<211> 474
<212> DNA
<213> B.fragilis


<400> 1179
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<210> 1180
<211> 1110
<212> DNA
<213> B.fragilis


<220>
<221> unsure
<222> (1097)
<223> Identity of nucleotide sequences at the above locations are unknown.


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gagcattccg ctaagttggc tgctctgagt gcagataccg ggaaggaggc ttttactgtc      780
aaactcagaa aagaggttca ccgtaatctt ggagcatata tgaccccgca ggtggcttat      840
atgcagacac tcggacttga aacgatggaa gtacggtttg ctcgtcaggc agaaacctgc      900
ctgaaactgg cacaatgttt gcaagaactg cctgagattg agtcggtgaa ctataccgga      960
ttggaatcta atccgtttta tgaattgagt acccgccagt ttggttctct tccgggagcg     1020
atgttgacgt ttgatcttcc gtcgcgtgag atatgttttc gtttcataaa tcggttgaga     1080
ttcatacgta agggcancga ctttatttga                                      1110


<210> 1181
<211> 201
<212> DNA
<213> B.fragilis


<400> 1181
agtgtagcgc tggaaggtat ctttgccatg gcggatcaaa cctttctgat cgagaaagct       60
tccactgaca atatattgag ttttatctgt gccaccactg atgctaagat tgtgatccat      120
ggaaggaacc caatcttcat acacttcctt aaaccagtcg gtatttgcat tcgatcccgt      180
atagtagttc catcggcgtg a                                                201
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<210> 1182
<211> 1125
<212> DNA
<213> B.fragilis

<400> 1182

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cctgttattg tttccatcct cttatgcgaa tttataacac aggacatatc aatctatatc     120
ggtacaggta tcgggcttat ctattcgtat aggtctctgt ctcgtaaagg ggcccgcata     180
cccaattttta tcctctatat ctctacggga atcttgacat tactgactct ggcaagcttt     240
attcccggag atttcgttcc ggaaggagca ttgccgctta cacttgaagt cagcatactg     300
attccgatgg ttattctatt cctgcacagg aggaagttca tcagccacta cctgcgtcaa     360
aatgcccaat gcaaccggcg gttgtttgct caaggagcag aatctgccat tgtatccgca     420
cgggtcgtac tgattttagg tattctccat tttgctgtca tcagcctgac ggttttggta     480
gcacatcccc tcacccggac ttccatactt gtactttatc acgtattgcc gcctactata     540
tttattctca gcatcctgct caatcaaata ggtatccgtt actttaatca tgtaatggcg     600
catacggaat atgtccccat cgtcaatacc cgtggtgatg taatcggaaa aagtctggct     660
gtggaagcta tcaactataa gaatgcctac attaatccgg tgatacgcat tgctgtttcc     720
acccacggca tgttgttcct ctgtaatcgt ccgcaaagct gcatcctcga taaaggcaaa     780
gtggatatac cgatggagtg ttaccttcga tacggggaga cactgacggc gggagccaac     840
cgcttattga gcaatgcttt tccgaaggcc tctgatctga aaccgacatt taccatctcc     900
tatcattttg aaaacgaaca gaccaatcgt ttggtctatc tgttcattgt cgatatggaa     960
gacgactcca ttctctgcga tccacgattc aaaggaggaa agttatggac tttccaacaa    1020
atagagcaca acttaggtac tcacttcttc agcgagtgtt tcgagttgga atacgagcac    1080
ctgaaacagg ttattggtat aagagaaaaa tacaaggtat cttag                    1125
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<210> 1183
<211> 2022
<212> DNA
<213> B.fragilis

<400> 1183

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acgggtaaat ctactttcct gaaatacatc tgtaagaata ccaagaagaa acacatcgtg     180
ctggcaccca ccggaatcgc tgccattaat gccggtggca gcactctgca cagcttcttc     240
aaacttcctt ttcatccgtt acttcctgat gatccgaatc tgagtttgca acggggacgc     300
atccatgaat tctttaaata caccaagcca caccgtaaat tgctggaaca ggtagaactg     360
gtcattatcg acgaaatatc aatggtacgc gccgatatga ttgatgccgt agaccgcatt     420
ttgcgtgtat acagtcgtaa tctgcgcgac cccttcggag gaaaacaagt tttactggta     480
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atcgagttac agaaagtata tcgtcagtca gatgcagtct ttgtcagtgt actcgaccac     660
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caaattgatg cttcggaaga agatttatac atcactctgg ctacgcgccg cgatacggta     780
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atcggtgtag taagcggcat cgacaacgac ggtatcatct acgtcatcac cgatgatggc    1020
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aaaaaggaga ttgaggaaga gaactgggt actttcacac aatatcccat ccgcctggca    1140
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caggccgatg tgcagtatgc cgcagctgcc cgtgctttcg acaaaggaga tttcgagaca    1440
tgcctcgagc agttttttcct ggccattcat tcccgttatg atatagaaaa gcctgccgcc    1500
cgaagattaa ttcgcaggaa attgggagtc gtcaacctat tgcgggaaca aaaaaggaaa    1560
```

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ctacaagcac aaatggaggc acagaaaaaa agcctgcaaa agtatgcccg agagtatttg    1620
ctaatgggaa acgaatgtat cactcaggcg catgacgttc gggccgccct tgccaattat    1680
gacaaagcga ttgagctcta tcccgaatac atcgacgcct ggatacgaaa aggaatcacg    1740
ctgttcaacg aaaaagagtt cttcgatgcc gagaattgcc tgaaccgggc agtcagcctg    1800
cgtccttcag agttcaaagc actctataac cgaggcaaac ttcgcctgca gacagaaaac    1860
atagaagggg ctttatcaga cctcgacaaa gcaactagcc tgaaacctga acatcccgga    1920
gcacacgaac ttttcggaga tacattatta aaagtcggta aagagacaga agcagccatc    1980
caatggcgta tagcagagga actacgaaaa aagaagaaat aa                       2022
```

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<210> 1184
<211> 624
<212> DNA
<213> B.fragilis
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<400> 1184
cagacaatta tgatactcaa actttacgaa aaaaataata atcctcagga cctgcaacgg    60
attgtagacc tactgaacga cgggggattg attatctatc ccacagacac catgtatgcc    120
atcggttgcc atggcctgaa ggaacgtgcc atcgaacgca tctgccggat caaagagatt    180
gacccgaaga aaaacaatct ctctattatt tgctatgacc tgagcagcat cagtgaatat    240
gccaaagtgg acaacaacat tttcaagttg atgaaacgta acctgcccgg acctttcact    300
tttatcctga cggaactaa ccggttgccc aaaatctttc gaaaccggaa agaagtaggt    360
atccgtatgc cggataacag tatcatccgt gaaattgccc gtctgctgga tgctccgatc    420
atgaccacca cgttgcctca tgacgagcac gaagacatag agtacgtcac tgacccggaa    480
ctgatcgacg aaaaactcgg tgacgtagtg gacctcgtga tcgacggagg tatcggggggg    540
attgaacctt cgacagttgt gaactgcact gaaggagaag ctgccatcgt ccggcaggga    600
aaaggggaac tggaagaggc ctga                                           624
```

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<210> 1185
<211> 435
<212> DNA
<213> B.fragilis
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<400> 1185
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agccaaacaa aagattcgta tctggagggc tttaagcttt ttatcgaaag cgtacagaaa    120
aacgctcaag actatacaaa agccgactgg gaaaaggctg acgaacaatt tacgaaactg    180
aaagacagtt ataataactt cagtaaacaa atgacttcgg acgaaaaagg agaagtgata    240
aaactggaat ccacttatgc tgccctaaag ttaaagaaaa taggagatga cgtgaaagaa    300
agcaccaaag atgcatttga gaaagtcaaa gatacagcca agatgcagc caaagacgta    360
aaagaaggtg cgcaaaaggc tgctaaaaaa ggtgagaaag caatggaagg gatcaaagac    420
ggtctgaaag attag                                                     435
```

```
<210> 1186
<211> 2238
<212> DNA
<213> B.fragilis
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<400> 1186
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ctgtgctgcc ttgccggctt tgcacaagga ggcaaagcgc tcgacctgaa agaaattaac    120
tcgggcaagt tcagcccga aaacatttat ggtgtggttc ccatgcctga cggcgaacac    180
tacacacaaa gaaatgccga aggtacacag atcgtgaaat attccttccg cacgggtgaa    240
ccggtggaag tggtattcga tgtgacaaaa gcccgcgaat gcccctttaa gaaattcgac    300
agttaccaat tttcaccgga cggatcaaaa atactgattg caaccgaaac caagcccatc    360
tatcgtcatt cttatacggc agtccactac ctgtatccgg tgaaacggaa cgacaaagga    420
gtgactacca acaatattgt tgaaaagcta tcggacggtg gtccgcagca agccccggta    480
ttctctccgg acggaaacct ggtggcgttt gtccgtgata ataacatctt cctggtaaag    540
cttttgtatg gcaacagcga atcgcaagtg actgaagacg gcaagttgaa cagtgtactg    600
aacggtattc ccgactgggt atacgaagaa gagttcggtt tcaaccgtgc cctggaattc    660
```

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aatgccgata ataccatgct ggcctatgtt cgtttcgacg aatcggaggt tccatcatac      720
actttcccccc tgtttgcagg tgaagcaccg cgttatgatg cactgcagga ttatccggga      780
gaatacactt acaaatatcc caaagcaggt taccccaact ccaaggtgtc agtacatacg      840
ttcgacatca aatcgaaagt gacccgtcag gtgaagctgc cgatagacgc cgacggatat      900
atcccgcgca tccgtttcac tcaggatccc aacaaactgg ccatcatgac actgaaccgt      960
caccagaacc gcttcgacat gtattttgcc gatcctcgca gcacagtgtg caaactggcc     1020
ctacgcgacg aatctcctta ttacatcaac gaaaatgtat tcgataacat tcagttctat     1080
cccgaatatt tcagctttgt tagcgataag agcggatatc ctcacttgta ctggtatagc     1140
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ggatggaatc cggataccaa cgagttttat tacaccagca atgaagaaag cccgatgcgt     1260
caggcggtat acaagataga ccgtaagggc aagaagatga aactgagcaa tcagccggga     1320
accaacagtc ccatcttcag cagctcgatg aaatatttca tgaacaagtt taccagcctc     1380
gatactccga tgctgattac cttgaatgac aacacaggta aggtcttgaa gactctcgta     1440
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acgttcaaaa caacagaagg agtcgatctg aacggctgga tgatgaaacc ggtcaatttc     1560
gatcctgcca aacgttatcc ggtactgatg ttccagtata gcggtccggg ttcgcaacag     1620
gttctggaca aatgggggaat cagttgggaa acctacatgg cgagcctcgg ttacgtggta     1680
gcttgtgtag atggtcgcgg cacaggtggc cgtggcagtg aattccagaa atgcacctac     1740
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ctgccttatg tggacaaagg acgtattggt atctggggat ggagtttcgg cggatatatg     1860
accatcatga gtatgagcga aggtacaccc gtgtttaaag ccggagttgc tgtggccgca     1920
cctacagact ggaaatatta cgatacagta tataccgaac gctttatgcg cacgccgaaa     1980
gaaaatgccg aaggctataa agcagcttca gcattcagcc gtgcagacaa cctgcatggt     2040
aacctgctcc ttgtacacgg tatggcagat gataatgttc acttccagaa ctgtacagaa     2100
tatgcagagc acctggtaca actcggaaaa cagttcgata tgcaggtata caccaaccgg     2160
aatcatagca tctatggtgg aaatacccgt aaccacttgt atacgaagct gacgaacttc     2220
ttccggaata atttataa                                                   2238


<210> 1187
<211> 846
<212> DNA
<213> B.fragilis


<400> 1187
aacatggata tacatcctat acaagaatct ccccggcggt ggatgacggc attgatattg       60
gccgttgtag cagcagggat acaaacaact ctactttggg gctatgccgg agccgacacg      120
cttccggctg caatagacgg gatttttatct gtcggattgc tttgcctcct ggcctatctg      180
gcatggtatg tcattggcct tgtctctata ttgcagaccg acttactgat agccgctttg      240
gctctgcttt tctggctggc gggaggcttt gctgtgcaat atgtgctgga acagaatatg      300
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gcctggggag tgatgatgtt gtggtatcgc ttgcagtcgc tgaataccgt tcaggaagag      420
atattagaag aggctgtttc gagagaggaa gcccttcgtg aagaattgag gcagattgaa      480
tgccgcgaag ataaagcgtt gccggaagag gcggaatgta ttgaccgcat cacggtgaaa      540
gatggtacac atattcatct gatccgtacc gacgagttgc tttacataca ggcatgtggc      600
gattatgtca cattggtgac ccctctcggga caatatgtca aggagcagac catgaagtat      660
tttgatgccc atctgccatc agcaggattt gtgcgtgtgc atcgttctac aatagtgaac      720
gtgacgcaaa tatcacgggt tgaactcttt ggaaaagaaa attatcagct ctcgttaaaa      780
aacggcgtaa ggctgaaagt gagtaattcc ggatataaat tactgaagga gcggttggaa      840
ctttaa                                                                 846


<210> 1188
<211> 1209
<212> DNA
<213> B.fragilis


<400> 1188
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gaccgtaaca agcacctctt tgagggaatg tggcctttgc cctatggagt ttcgtataac      120
tcttatctga ttgatgatga aatggtggca ctgatcgata cagtggatat ttgctatttc      180
```

```
gaagtatatc ttcgaaaaat cagaaatatc ataggcgacc gtcctatcaa ctatttgatt    240
ataaatcaca tggaaccgga ccattcaggt tctatccgat tgattaagca acactatccc    300
gacattgtga tcgttggcaa taaacagact ttcggtatga tcgaaggttt ttatggtgtg    360
accggcgagc aatatctgat taaggatggt gattttctcg ctcttggacg tcataaactg    420
cgcttttacc tgactccgat ggtacactgg ccggaaacga tgatgacatt tgacgaaaca    480
gatggcatac tcttctccgg tgatggtttc gggtgttttg gtacgctgga tggcggcttc    540
gtggatacac gcatgaatat cgaccattat tggggcgaaa tggttcgtta ttattcgaac    600
atcgtcggca aatacggttc accggtacag aaagctttgc aaaagttggg tggacttcct    660
atctcggcta tttgttctac gcacggtccg gtatggactg agaatatcac gaaagtggta    720
ggcatttatg ataaactgag ccgttatgac gcagatgaag gtgtggtaat tgcatacggc    780
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ggcatcaaaa acattgtgat gcacaatgtc agcaaaagta atccctctta tatccttgcc    900
gatatattcc gttataaagg attgattatc ggtagcccta cttacagtaa ccagattttc    960
ccggaagtgg agtcgcttct gtccaagata ttggttcgtg aattgaaagg acgttatctg   1020
gggtatttcg gttcgttcac gtgggcaggt gccgccgtga acgtatggc cgagtttgca   1080
gagaaaagta aatttgaatt ggtcggtgat cctgtagaaa tgaaacaggc catgaaggag   1140
atcacatatc aacagtgtga gaacctggca cgtgctatgg ccggccgttt aaaaaaagac   1200
agagtataa                                                          1209


<210> 1189
<211> 879
<212> DNA
<213> B.fragilis


<400> 1189
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gacgggacgt tggttagttt caacactcac gaaattcctt cgtctaccct cgcagccata    180
gccgaagcaa aagctaaagg tatcaagata ttcatcgcta ccggacgccc gaaagcgatt    240
atcaacaacc tcaccgccct tcaggaacgg gaactgatag acggctacat caccatgaac    300
ggagggtatt gtttcgttgg agatgaggtg atttacaaac attccatccc ggtacaagat    360
gttaaggcac tggctgcact ttcggacgaa agaaactttc cctgtatctt tgtagccgaa    420
cataccgtag ctgtttgcaa taccaacaag ctggttaacg aaatctttca tgatttcctg    480
catgtagata tcctgcccat ccaaactaca gccgaggcta cgcagcccga aatctttcag    540
atgactccat tcatcactac cgaagaggag aaaacggtat tgcctttact cccgaactgc    600
gaatccggac gctggtttcc tgcatttaca gatatcgtag ctaaaggtat ccgcaaacaa    660
aaaggaatag atgaaatcat tcgtcatttc ggtatcggac aggaagaaac aatggcattt    720
ggtgatggag gcaacgatat cagtatgttg cgccatgcag ccatcggagt agccatgggc    780
aatgcgaatg acgatgtcaa agaaaccgcc gactatataa ccacttctgt agacgaagac    840
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<210> 1190
<211> 615
<212> DNA
<213> B.fragilis


<400> 1190
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tcgtatgctt tgggattcgg gtttgacaaa cagacagcga tggatgccat tcatgatgtg    180
ttttgcaggg tatgtatccg agaaagagaa gtgcaggaga tacagaatcc taaattttac    240
ttgttgcgtg ccctgcggaa ccagttgatt gacacctata aactcaaacg aaactactcg    300
gaggttctta ccggtgagat taccgatgaa cttccatata aaatcaaaat taccgtagag    360
gatgaaataa tcgcagcgga agagcaggcg gaagtatcac agaaagttga cgagattctg    420
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tatgaggaaa ttgcagagat tatgcaaatc agtgttcctg cctgtcgtaa attgctctat    540
cggaccttac ttaaactgaa gcacaataac acattagtgc tcttctatct cttactttct    600
attaatgttg gttaa                                                    615
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<210> 1191
<211> 738
<212> DNA
<213> B.fragilis

<400> 1191

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tccgtaaaat ttcaactatt aaatacccta ttcatggata ccgctctta tcttttgccc      60
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caggggcatca agcacttcat tgtcgaagat gttcgctcgg cccgccgctt cctgaaaaag     180
gtagaccgtg agattgatat tgactcactc acttttttacc cgctgaataa acatacttct    240
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tccgaagccg gttgtcctgc tgtagccgat ccgggagctg acgtggtggc tattgcacaa     360
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ggttcgggat ttaacgggca gagttttgcc tttcacggct atctgcctat agagccgggt     480
gagcgtgcaa aaaaaataaa agctcttgag caacgggtat atgccgagca tcagacacag     540
ctatttatag aaacaccta tcgtaacaat aagatggtgg aggatattct gcataattgt      600
cgtccgcaga ctcgcttgtg tattgcagcg aatatcactt gtgagggaga atatatccgt     660
actaaaacca taaaagagtg gcaaggaaaa gtacccgacc tgactaagat accttgtatt     720
tttctcttat accaataa                                                   738
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<210> 1192
<211> 1374
<212> DNA
<213> B.fragilis

<400> 1192

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tcttcggtgt tcctcccgtt tcggaatctc ggactggtca ttgtggacga ggaacacgaa     180
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tggcagaatg ccactaccgg caaattcggg tgggtggaac tgaaagaacg ctataaggaa     360
attcaattgc cggagattat tccggtagat ataaaggagt tgcaccgcaa gaagcggatg     420
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caggtgattc tgtttcagaa tcgccgggga tttgctccga tgatagagtg ccgcacgtgc     540
ggatgggtgc caaagtgcaa gaactgtgat gtcagcctga cctatcataa aggtatcaat     600
cagctgactt gccactattg cgggtatact taccagttgc cccgttcgtg tccggcttgc     660
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caggttgccg gacgtgccgg acgaaaaaat aaacggggca gggtagtgtt gcaaaccaaa     1020
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ggacaactgg ctgagcggca gatgtttcat tatcctccgt attaccggat ggtgtatgtc     1140
tatctgaaaa accggaacga gacgttgctt gatgtgatgg cacacaccat ggccgagaaa     1200
ctgcgcgcat tgttcggaaa ccggatactg ggaccggata aaccgcccgt tgcccgtatt     1260
caaactttgt tcatacgaaa aatagttgtt aaaatagaac aaaatgcgcc gatgagtcgt     1320
gcccgtgaat tagtcttcac cacggggctg gaaggatcag cgcggtcagt tcat           1374
```

<210> 1193
<211> 1533
<212> DNA
<213> B.fragilis

<400> 1193

```
ataacaaact caataaaaac aaacgcaatg ttacgaaaaa tcagattaac atgtggcatc      60
atctgcctga cactgatcac cttgctattc cttgacttta ccggaaccct tcacggttgg     120
ttcggctggc tggcaaagat ccagttcctc cctgcagtac tggcattgaa cgtaggagta     180
```

```
gtagtccttt taatcatcct gacaggagta ttcggccgaa tctattgctc ggtgatttgt    240
ccgttggggg tatttcaaga tgtagcagcc tggattggca aaaagcggaa aaagttaccc    300
tactcctatt ctcccgctct ctccctccta cgctacgggg cattggcaat attcatcatc    360
accctggtgg caggagtaag tttcatcgca actctatttg ctccctacag tgcttacggg    420
cgtatcgcaa acaacctgtt ccaacccatt tggctgtggg gaaacaacct gttcgcccat    480
ttagccgaac gggccggcaa ctatgcattt tatgaagtag acatctggat aaaaagtctg    540
cctactttca ttgtagccgc agctactttt gtcatcctga tattattggc atggcggaac    600
ggacgcactt actgcaatac aatctgcccg gtagggacgg tactgggatt tctttcacgt    660
tactccttgt tccgcatcac aatagatacg gaaaaatgca ataagtgcgg actttgtgca    720
cgtcattgta aagcggcctg catcaatgct aaagaacata cgatcgatta cagccgatgc    780
gtggtttgca tggattgcct cggtaaatgc aagcagaaag cactcagtta ccaattgcgg    840
acaaccaagg ctcggccagc aaaagcagaa gaaaatgctc ttgcagcctc atccaaggaa    900
gtcaatgaag cacgtcgcaa tttccttacc gtaacggcaa tggccgctac ggcatcagcc    960
ctaaaagcac aagagaaaaa agtagacgga ggactggcgg ccatagaaga taaaaagatc   1020
ccgaaccgcc agactcccat tacacctccc ggttcgttga gtgcacgaaa catggcagca   1080
cattgcacag cttgccaatt gtgcgtatca gcttgttcca accaagtatt gcgtccttcc   1140
actaacctga tgaacctgat gcaacctgaa atatcatatg aacgcggata ctgccgtccg   1200
gaatgtaatg actgttcaca agtatgtccg acaggagcca tacaccccat tacagcagcc   1260
gacaaatctt ccactcaaat cggacatgct gtctggatca aagcaaattg cgtgtcgctg   1320
accgatggag tgaaatgtga caactgtgcc cgtcattgtc cgacaggagc tatccagatg   1380
attgtcgccg aaccggaaaa agaggcttct ccccaaattc cggcgatcaa caccgagcgt   1440
tgcatcggct gtggagcatg cgagaatctt tgtccggcac gtccgttcag tgccatctac   1500
gtcgaggggc acgaaaggca tcgtatcata taa                                1533
```

<210> 1194
<211> 798
<212> DNA
<213> B.fragilis

<400> 1194

```
aaaagtgttc cgggtatatt tacctctaat atagtggctg ttatgaaagt attgattgta    60
gaagacgaaa ctgctgccta tgaaaattta acggatattc tcacagagat aactcccgac   120
atccggatca tggcaaatac ggaaagtgtc acacaaaccg tcgggtggtt acaatctaat   180
ccggctccgg atctgatatt catggatatt catttatcgg acggatcggc ttttgctatt   240
ttcgacagaa tagaactgga gactcccatc atattcacaa ccgcttatga ccgatatgcc   300
atcgaagctt ttaaggtgaa cagcatagat tatttattaa agccggtcaa agtggaagat   360
gtagaacacg cactggagaa atacagcaaa ctgacccgac aggacttatt acaatatttg   420
tcacaactga ctctattgaa acctgcaccc agatacaaag acaagttatt gattgcacac   480
aaagacaaac tgttaccggt aaatataaaa aatatttctt attttttacgc aaccggcaaa   540
aacacgtatg tatgcttaaa agacggcaat cgttatccat actccaagac tttggaacaa   600
attgcttcct cactgaaccc ggaagacttc atccgggcca ataagcagtt tatcgtagcg   660
agggatagcg taacggatat aaccatctgg ttcgacagcc gtctacttat cacgctcgat   720
acagaagtac cggaacgtat ttatgtcagc aaaaacaaag catcggaatt aaaaacatgg   780
cttgtaaacg ataaataa                                                  798
```

<210> 1195
<211> 843
<212> DNA
<213> B.fragilis

<400> 1195

```
ataactatgt tttatgatta cctttgcaaa ggtaaaagct tgtatctaag tacacaatgc    60
ttattaataa ccatttcttt tcccgatatg gacattgttg acaaactgaa caaagagttc   120
ctgactcaac ccttctgcaa aaacgaacag ctgccggaag aactgaatga atataaacga   180
atcgcataca actatgcacg aatagaaaat tcaatcgccg ttctaagtga tatgcatacc   240
aatatcagct atatctatta tggaggaaca gctgagacat tgggcatagc ccgaaaagga   300
gacaatcaaa atcttgaatc aatctgggaa aaagaagtct ttaaatatat ccatccggat   360
gacttggcgg aaaagtatgt acaggaactt cgtttctacc attttctgaa acagattcca   420
cacaaaaaac gtgcagatta ctttcttatg agtaaactcc gtatgcgtga tccttccggg   480
```

```
aaatatatcc ctatcctaca caggatgttc tatgtagcta cccattcaaa cgacagtatg    540
tggctggctc tgtgtcttta caatttgtcg gtcgaccta ctatgagttg tagagtgatc    600
aactcgacaa acggacaggt catagaactg gaaaagcaag attgcagcaa attgctatcc    660
gatagggaga aaacaatatt acagttgatc gatatgggga aaacaagtca tgagatcgcc    720
cgggaactgt ttataagcaa aaataccgtc agccgacacc gacaaaatat attggaaaag    780
cttcaggtaa agaactccat tgaagcttgc agaattgcca aagaacttaa gttactcttc    840
taa                                                                  843
```

```
<210> 1196
<211> 588
<212> DNA
<213> B.fragilis
```

```
<400> 1196
acgcaggtta ccccatgccg aaggctacat gtatgggagg aattaatatt aactttaat     60
tattacatca taattatgga aacaacatct atcaagcttt attcattgaa ttacaatgat    120
acgaaaacgt atctgacaac actgctattc gtagtgggca atatggcact cccccaactt    180
ttccatctca ttccgcaagg tggtatcact tggttacca tctatttttt tactctgatc     240
ggagcttata aatacggatg gaaagtaggg ttactgacag cacttctatc gcctgttta     300
aactcattat tgttcggcat gcctcaaccg gtgatcttac ccgccatact cttaaaatcg    360
acacttctag cgatagctgc cggttatgca gcccaccgct acaaacgcat ttccatccct    420
atcctcctcc tggtcgtgtt atcctatcag gtggtcggca ctttaggcga atggatcctt    480
gtcaacgatt ttttcagtgc cgtacaggat ttccgtatcg gtctgccggg aatggctctg    540
caaatattcg gaggctatct gtttataagt cgtttgattt ataaataa                 588
```

```
<210> 1197
<211> 264
<212> DNA
<213> B.fragilis
```

```
<400> 1197
aatcaaccta ctattctta cattcttact tcattttact atttatctag tataaaatca     60
attaatatgg atagtatagg aaaaagaatg tatcgtaatc ttggagacga taccaaagcg    120
aaaattagtc aatcattaag aggtagaagc aagtcagctt cgcatatcca agcaatatca    180
caaggcatga ctaattactg gaagactata ccagtcaaaa cagatgataa cccaagtgat    240
aaaacaaaaa aagaggggca ataa                                           264
```

```
<210> 1198
<211> 639
<212> DNA
<213> B.fragilis
```

```
<400> 1198
acaagtaaca ccatgaaaaa agtagtaata tttgcaagag tatcgagcac caacggaaca    60
caagactatg aacgtcaaat aaatgatttg cagacattag cctcagcaaa caactggact    120
gttgaggctg tatttgcaga aaaggtatct ggagcgaaaa agaatactga acgcatagaa    180
ttaatgaata tgataaacta tatcaactca cacaacatac ataaggtact agtaaccgaa    240
ttgtccagac ttggacgtga tactttacaa gttttgcaag ctatagagat actcaatcaa    300
aacaaagtat cagtattcat tcaaaattat aatattgaaa cgcttactcc agagggagaa    360
atcaatccta tgagccagtt tcttattact atacttgccg aagtagcacg aatggaacgc    420
aagactatta gagaacgtgt tgcaagtggt taccagaatt ccgtagcaa tggtggtaag     480
gtagggcgaa aagttggata tacgaaaagc gatgaggtta tgagggaaga gtatgcagaa    540
gaattaagat tactgaaaag agggtactca ctgcgaaata cctcaaaact gacgggaaca    600
agtatcaaca ccctgcgaaa attaacccaa ttaacataa                           639
```

```
<210> 1199
<211> 1344
<212> DNA
<213> B.fragilis
```

<400> 1199
ttcacgggca cgactcatcg gcgcattttg ttctatttta acaactattt ttcgtatgaa   60
caaagtttga atacgggcaa cgggcggttt atccggtccc agtatccggt ttccgaacaa   120
tgcgcgcagt ttctcggcca tggtgtgtgc catcacatca agcaacgtct cgttccggtt   180
tttcagatag acatacacca tccggtaata cggaggataa tgaaacatct gccgctcagc   240
cagttgtccc gccaccatat cttcataatc gttcgtcatc acctgacgga tgatgggatg   300
gtctatactt ttggtttgca acactaccct gccccgttta tttttttcgtc cggcacgtcc   360
ggcaacctgc gccatcaact ggaaggcacg ttcgtacgaa cggaaatcgg gataattcag   420
catcgtgtcc gcattgagta tccccaccac gctgacgtgg tcaaagtcga gtcctttgga   480
taccatctgg gtaccgatca gtatatcggt ctttccctgt tcaaagtctg caataatttt   540
ttcgtatgcc gaccgcgtac gtgtagtatc gagatccata cgtgctacgg aagcttccgg   600
aaaaatcagc ttcacatcat cttctatctt ttccgtacca aatcctctgt gcatcagctc   660
gaccccttcg caagccggac acgaacgggg caactggtaa gtatacccgc aatagtggca   720
agtcagctga ttgatacctt tatgataggt caggctgaca tcacagttct tgcactttgg   780
cacccatccg cacgtgcggc actctatcat cggagcaaat ccccggcgat tctgaaacag   840
aatcacctgc tgtttattat cgagtgcctc gcggacatat tgcagcagca acggagagaa   900
ctgccccgtc atccgcttct tgcggtgcaa ctcctttata tctaccggaa taatctccgg   960
caattgaatt tccttatagc gttctttcag ttccacccac ccgaatttgc cggtagtggc 1020
attctgccaa gtctccaccg aaggagtggc agtacccagc aacgtctttg ccccatacat 1080
cgaagccagc acgatggcag cattccgggc atgatagcgc ggtgcgggat cttgttgctt 1140
atacgtattt tcgtgttcct cgtccacaat gaccagtccg agattccgaa acgggaggaa 1200
caccgaagag cgtacccca gaatgatgtc gtaaccctcc tccgtcaact gcttttgcca 1260
gatctctact ctctcggcgt cggggaactt ggagtgatag attcccaacc cgggaaccga 1320
acaccccgttt cagccgttcg gtga   1344

<210> 1200
<211> 198
<212> DNA
<213> B.fragilis

<400> 1200
ctaaaaacaa cgaccggacg agtaaatcag tataccatat ttcccactat gcgggagctg   60
aatgtgggag gatttgcggc gtgcctttcg gtatatcccg aaaaagcacg ccacaagaaa   120
aataaattta aaacggcatg taaccaaata cgcagcgcaa tgaacaggac tgaaacctac   180
aactccacca cacaatag   198

<210> 1201
<211> 192
<212> DNA
<213> B.fragilis

<400> 1201
aagatatcga caacaaaatc gccttgttcg ataaatacgg atacactaat attgaaggtc   60
aggaagagta tcttgatctg tcttgaccag gatatcgaga aagcccaaag aactgtagat   120
gaaaagcaag cagcagtgga cggtttgaac gctaccttga agaaactctt ggatgcttat   180
gcagctgaat aa   192

<210> 1202
<211> 1260
<212> DNA
<213> B.fragilis

<400> 1202
cccaatagag ccatagggat tattacgaat atgaataaat tgcttatgcc atttatgacg   60
cttgtttgct tgctttttac ggcttgcaac aaggatgata ttttaccccgg tggaccgatg   120
ctctggacgt atgagattct gacaccggaa agtgtagagt atgaaggtgg caccgtaggt   180
tggataccta aagaatgttt caaggcaaac ggtaatgagg gatatatcgt gatgacttgc   240
aagaatttcg atatgctcaa tcctatttcg ggcggttctt acacatacga ttgtggatgg   300

```
gcaacgctca aggtagaagc caatcagttg aagattcatt ttccccgtca ggtttcggaa   360
gccccggatg catacgagga gattacaatc tcgacaaatg atggaaagag aacagcaagt   420
acaattatct gtttgtctag aacctttaag gacgaagggc aacccgatcc agagccgaaa   480
cctctgcccg aagaagccaa gttcaagatg aaaaaggcat acttcactcc gtttatgcac   540
cttgacaccc aattcccggc accgctcgat ctggtgacgt tcagaatcac ggatataaac   600
gacaattaca ccccgctggg ctttcctgag tttacacaat attacgactc tattgtttgg   660
agtgccgagg gtttccctca tacgttcaga gtctatgaaa gcaatacaac ggagggaggg   720
atggaaacac atcttgctac ggaatggagt tcgcacttct tcaaaagcgg taccatcaaa   780
aattacctga aaggctatcg caaaggaaag gttgaatatg agacctcgct cgctgtgaga   840
ctgtacgaac gtgatttctt ggggattgaa tggggagacaa tcgtgttgca gagcccacag   900
aaccttacaa cctattgcct gctggacaca gattatgagt atcaggtgta tgacatcgtg   960
gcaaaggatt ataacccctt ttctaaaata atcccggtga accataagca actctcggat  1020
tcagacttcc cggcagcagc gcaaaaagcc atcaaaacac tgatggagaa taacattggt  1080
gaagggcaaa atgctggtgg aaaagagaac ctgttcaaat gcctgcccga agagggtgtg  1140
aaagctgaat tgtattggga aaacaagact acccgtatac tgatgttgca tcaactctcc  1200
actgaccccg atgacctgac acaagagaag tattatctac acgttgaacc taaacaataa  1260
```

```
<210> 1203
<211> 1296
<212> DNA
<213> B.fragilis
```

```
<400> 1203
tatgacatgg caaaaataca aattaaatct gagaaactca cacctttttgg aggaattttt    60
tcaatcatgg agaaatttga ctccatgctt tcacccgtta tcgactcaac actgggtcag   120
agatgcagca gtatcttcgg atatcagttc agcgagatag tccgttcgct gatgagcgtt   180
tatttctgtg gcggctcatg cgtggaagat gtaacgtcac aactgatgcg ccatctctcg   240
tatcatccta cccttcgtac atgcagctct gataccatcc tcagagccat caaggaactg   300
acacaggaaa acatctccta tacttccgac caaggcaaga cctatgattt caatactgca   360
gacaaactca acacattgct tataaacgct ttggtttcta caggcgagtt gaaggaaatt   420
gaggaatacg atgttgactt tgaccatcag ttccttgaaa cggagaagta tgatgcaaaa   480
ccgacctaca aaaagttcct cggctacagg cctggcgtat atgttatcgg tgacaagata   540
gtctatatcg agaacagcga tggtaacacg aatgtgcgtt ttcatcaggc agacacccat   600
aagagattct tcgctcttct ggaatcccag aacatccgtg taaatcgctt cagggcagac   660
tgcggttcct gctcgaagga aatcgtcagt gagatagaga agcattgcaa acatttctac   720
atccgtgcca accgatgcag ttcgctctac aatgacatct ttgctctgag aggatggaag   780
acggaggaga ttaacggcat ccagttcgaa ctcaattcca ttctcgttga gaaatgggaa   840
ggcaagtgct atcgtcttgt catccagaga caaagacgca acagtggcga ccttgacctg   900
tgggaaggcg aatacactta ccgttgtatt ctgaccaacg attacaagtc atcgacaagg   960
gacattgttg aattctacaa tctgcgtggc ggcaaggaac gtatctttga cgacatgaac  1020
aacggattcg gttggagcag gctccccaag tcattcatgg cggagaatac tgtctttctt  1080
ctgcttactg cattgataca caatttctac aagaccatca tgagcaggct tgacaccaag  1140
gcttttgggc tcaagaaaac gagtcgcata aaggctttttg tcttcagatt catctccgta  1200
cctgccaagt ggatcatgac tgcaaggcaa tacgtgctga atatctacac agagaaccga  1260
gcttatgcaa aacccttcaa aacagaattc ggataa                             1296
```

```
<210> 1204
<211> 498
<212> DNA
<213> B.fragilis
```

```
<400> 1204
ttaaactctt ataagatgaa aaagaatgta tttatttttgt ttgtagttct tttaactact    60
agtgtgtttta tgtcttgttc cagtgacgat gacaatgaca atggaaaagt tgaaaatacc   120
attattatca atggtaaaga gtatcttaat gatgaatctg catctgtgtc gtacaactct   180
tatagccagt ctattagttt tgaggcaggc tttagtaatc cagaaagtct tatggatata   240
agttacttta cgattgcaag taatgatgct gctagtgtag ataagctaac caacggaatg   300
gaacttaatg ctaaagttaa agaatttgta aaaaatacag atttaggctc tagctatact   360
tatactacgg taggtggaaa agtcgttgtg gataatgtta cctctgaaag tataacgctt   420
```

```
cgttatgatg attttaagtt tacaaaaaat ggtggtgaat atacgataaa aggtagagtt    480
ctttatcata agaattaa                                                  498
```

<210> 1205
<211> 198
<212> DNA
<213> B.fragilis

<400> 1205
```
ccaactgatt atcagacgat ttatatttc cattttgcc attttacacc cttattttgt     60
tacttagtac actttgaatt ctcattttct ttcgcacctt tgcaatatcg gaaaacaaaa   120
gaaaatcaac tatttagcgt aatcacccgg ttatggtacc taaatcggga taaaaccagt   180
agcgtatggc aaagatag                                                 198
```

<210> 1206
<211> 195
<212> DNA
<213> B.fragilis

<400> 1206
```
aaaaaatgtt atgtaagtaa atcaatgttt tctcttgccg atgacggcct tgcctctatc    60
ttatgtaata cctctatcta cagttacttt gtaggtaacc ccaaacagac tattgaagga   120
tgcaaatggc gttttgccaa aaggaatagc agtaaaaggg aatccttatt tataataagg   180
tataaaaaag aatag                                                    195
```

<210> 1207
<211> 201
<212> DNA
<213> B.fragilis

<400> 1207
```
agtcttctat atcccagcat cttccttccc attttcctag aatatagtga ctttggctgt    60
gattttggat actctacata taatagtgga tggagttgtt ttgtaattag taaatacgga   120
aaacaataca tagctgaaaa ggacaaatgt atgaatggtc ctttcaattt gtttaaagta   180
ttagaattac cacaacatta a                                             201
```

<210> 1208
<211> 579
<212> DNA
<213> B.fragilis

<400> 1208
```
tttatttcat acagcgaatt tataatggta aatgaattga ataaagaaat ggatgtggat    60
aaatacaaaa taagaagttg gtctaaagac gattttttcca ctttagctaa atatcttaat   120
aataaaaga tatgggataa ttgccgtgat agcctaccat atccttattc tgaaaacgat     180
gcgcaacaat tcatcctgtc cgtttcaagt caaaacgaac aaaataatta ttgtatcgaa    240
gtaaatcagg aagcggctgg taatataagt tttgctcgtg gtatagatgt agagcgctac    300
aatgcagaat taggttattg gcttgctgaa ccatattggg gtaaagggat tatgacccaa    360
atgttagcac tggctattag cagctatttt catcatacag atgtgatgcg catttgtgca    420
aatgtttatg ctggcaacat agcatcgatg agagtattag agaaaatagg ttttcgtaaa    480
tgtggcatac atcgtaatgc ctgtttcaag aatggagtat ttacagattg ccattatttt    540
gaattgctaa aagaggaatt taggaatttg gttaaatag                          579
```

<210> 1209
<211> 708
<212> DNA
<213> B.fragilis

<400> 1209

```
ttacttgcat ataacacttt acttctcaaa tggttttata tatctttgtg cgttgaacgc    60
gatatatttc aatttattat gaacggattt tttcttttga aacgtccttt tatctggttg   120
gcccgctttc gccaccgttg tggatatggg gttcattcac catttgcttt cgacttgata   180
accaacgtca tttatgagcg tacccccttac tatgcctaca gttcgttgga agccgaacag   240
aaaaaaatgt cggcaaactc cggtaggaaa tggaagcatg aatcgaagaa ggtgaaccgg   300
ttgctgtttc ggctggttaa ctatattcag cccgatacga ttgtggatgc cggaacatta   360
tcggcatcgt ctttgtattt gcaggccgga catgctaaag ccgattatgt gggtgcttcc   420
gatttgtcgg agctctttct ggagaaagat acgcctgtcg attttttgta tttgcaccat   480
tatcggaatg aggagtttgt ggagcaggtg tttgatcttt gtgcatcgag aaccaccgga   540
cgaggactct ttgttattga gggcatccgc tatacgaaga agatgaaagc actctggaaa   600
aagatacagc aggacgaccg gacaggcatt acattcgatt tgtatgattt gggaattgtc   660
tttttcgacc gtaccaagat aaaacagcac tatctcgtca acttctga             708
```

```
<210> 1210
<211> 204
<212> DNA
<213> B.fragilis
```

```
<400> 1210
ctaattttgt attcggataa aggcaactct ttccaagaca ttagagaaaa gaagaaacgt    60
tatgtttatc ttgtaggtga aaacgtagga aattttcaga ctgatgtaag agatagcata   120
gtggttctca cgcatatagc gtggaccgtt cttgttacat ctgcatcaaa ggtttcctat   180
gaacttcact tagacgtggc atag                                          204
```

```
<210> 1211
<211> 723
<212> DNA
<213> B.fragilis
```

```
<400> 1211
tactacctgt attctcttat tacccattcc acagccattg aaggctcaac gcttacggaa    60
cttgatacgc agcttctttt cgacgaggga gtaacagcga aagggaaacc gcttgtgcat   120
catctgatga atgaggattt gaagcaagcg tatgaacttg ccaaaaccga atccagtagc   180
cttgtacaga taactcctgc cttgctacaa agattgaatg caacactgat gcgcactaca   240
agcagtgtac acagtgtaat gggcggttct ttcgattctt cgaaagggga ttttcgtcta   300
tgtggtgtta cggctggtgt cggtggacat tcttatatga actatctgaa agttcctgct   360
aaggtagatg aactttgcgc tatactgcaa gtgaagcaga agacagtggg gacacttcgg   420
gaacaatatg aactgagctt caatgctcac ctgaatttag taaccataca tccgtgggtg   480
gatggtaatg gcagaatggc tcggttgctg atgaactaca tccaattttg ctatcacctt   540
ttcccgacga agatatttaa agaggataga gaagaatata tcctttccct acgccaatgt   600
caggatgaag aaaccaatca ggttttcttg gactttatgg taaggcaatt aaagaaatcc   660
ctctctttgg agattgaatg tttcaatgct tcacaaaaga gagggttcag ttttatgttt   720
tag                                                                 723
```

```
<210> 1212
<211> 276
<212> DNA
<213> B.fragilis
```

```
<400> 1212
ctacaaaggt atcatccatg cgggagtagg aaacggcaac ttccacaaaa acattttacc    60
ggtactgctg gaagcacgca agaaaggaat cctcgtggtt cgctcctccc gcgtacctac   120
cggtcctacc acaatggatg ccgaagtaga cgatactcaa tatcagtttt tgcttctcag   180
gaactgaatc cgcagaagtc acgtgtattg ctgattctcg gactgaccaa aaccaatgac   240
tggaaacaga ttcagcaata ttttaatgag tattaa                            276
```

```
<210> 1213
<211> 1380
<212> DNA
```

<213> B.fragilis

<400> 1213
```
ttagcatatc atttaccgat tcagagacaa tttattcaat tatctttgcc aaaaataaaa    60
aagaaagata tgattctaca attggctttt gtactgacag ctatcattat cggtgcccgt   120
ctgggaggta tcggactcgg agtaatgggc ggcgtaggtt taggaatact tacttttgcc   180
ttcggattgc aacccacagc tcctccaatc gacgtgatgt tgatgattgc cgcagtcatc   240
tcggccgcct cctgcatgca agcagccggc gggctggatt atatggtgaa gctggcagaa   300
aagttattgc gtaagaaccc gtcacatgtc accatattaa gtcccattgt gacctacctg   360
tttacttttg ttgcgggaac agggcatgtc gcttactccg tattgcctgt gattgcagag   420
gtagccaccg aaacaaagat tcgtccggaa cgtcccctcg gcatagccgt catcgcttcg   480
caacaagcca tcacggcaag tcccatctcg gcagccacgg tcgccttact cggactgttg   540
gccggtttcg acattaccct gttcgatatt ctcaaaataa cgattcccgc aaccattatc   600
ggcgtactgg taggtgcact ttttctatg aaagtaggta aagagctggt agacgacccg   660
gaataccaga acgattggc tgaaggatac ttcaactcaa agaaaataga gattaaagac   720
gtacacaata ggcgcaatgc aatgatatcg gtgttgattt tcatcttagc taccgccttt   780
attgtatttt tcggctcttt cgacggcatg cgccccacat ttctgatcga tggcgaaaca   840
gtcaccctgg gcatgtctgc cattatcgaa atcgtcatgc tttcggcagc tgcgcttatc   900
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atgcaggcgg taatcgctat ttttggtata gcctggatgg gcgatacgtt tctgcaaggc  1020
aacatggggc aactgaccga atcgatcgaa ggacttgtcc gccagatgcc gtggttgttc  1080
ggcattgccc tgttcataat gtccatcctg ctctacagcc aggctgctac ggtacgtgca  1140
ctgatgccgt gggtattgc tctcggcatt tcaccgtata tgctgatcgc catgttcccg  1200
gctgtaaacg gatatttctt cattccgaac tatccgacag tagtggccgc catcaatttc  1260
gaccggaccg gtacaacgaa aatcggtaaa tacgtattga atcattcgtt tatgatgccc  1320
ggactgatat cgaccgttgt agccatcgcg ctcggattgc tctttatcca gatattctaa  1380
```

<210> 1214
<211> 984
<212> DNA
<213> B.fragilis

<400> 1214
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ttaaaaaccc aaacctggag atttatgaag aagttaatgt tactgaccct tttgagtacc    60
tttatatttt acagttgctc ggatgatgat tcatgcacaa cctgtaagga ggataatgga   120
agtttggtca ccccgatttt gagcgttacc ctatccgata cacagagtcc gatgacgggt   180
gtattggaag cctacccttg ccaggcagga ggtgccattt attacggcaa ttatatcgaa   240
ggcaaactga cctcctttcc gggaatgtat tacctccaga acggagagat ctatggagat   300
aagaacaggg aaatatctct cccggtgggc acttacaaca tgatatactg gggtaccccg   360
aaatatgaag agctgattta cagcaacccg gtcgtcgtcg cccccaaat cactatcgga   420
ggagaccttt cacaacagta tttcgggctc cggaaagttt cggcggatac gacctattat   480
ccagtattcg acttagtgta taccgtgaaa ccggcacata tcggcacgga agaactgagt   540
gcagccatgc agcgtgttgt tgccggtctg aaagtaatcg tcaaaaacaa aaacaacggt   600
atcctaagtt ccagtattgc cggcatggaa gtacatgtag gaggcattgc cgagaagctg   660
aacatgtata cagccgctcc ggtcaaccaa accaaaacag tatctttccc gcttgtactg   720
tcggcagacg gtacacagat gagcaatgcc acggtcatgc ttttttccatc atccgccaaa   780
ccaatgttca agctgatcat caagcttaaa aacggaaata ccaaagtcta ccagcaacca   840
ctcaatgctc cgttaaaagc taataacaag ttgactctga cattaacctt gggtgatatc   900
ttctcggaag aaacttccgg gggattcacc atcgataact ggcaagaaga gaacgaaaca   960
atagatatac cgacactgga ataa                                           984
```

<210> 1215
<211> 252
<212> DNA
<213> B.fragilis

<400> 1215
```
gttcctgagc aacaaaaagt tgcccaggat tttgccatgt cagaattttc acttatctta    60
gtgttgcaaa aagaaaacaa gcaaaactct aatatgacat ggcaaaaata caaattaaat   120
```

```
ctgagaaact cacacctttt ggaggaattt tttcaatcat ggagaaattt gactccatgc      180
tttcacccgt tatcgactca acactgggtc agagatgcag cagtatcttc ggatatcagt      240
tcagcgagat ag                                                          252
```

```
<210> 1216
<211> 675
<212> DNA
<213> B.fragilis

<400> 1216
aataaacata atcaaaaggt agaaatgaaa aaagtatgtt taagcctgct tatgggactg       60
atggtacaaa tgacctttgg gcagacactg gaaaaaatgc aatggttcaa cgaaccggaa      120
caatgggaga taaaaaataa tgtattgtcc atgtccgtta ctccgcaaag tgattactgg      180
cgtatttctc actacggttt tacagtagat gacgcacctt ctattatgc cacttatggc       240
ggtgaatttg aagcgaaagt caaggttgtc ggagagtata agaacgttt cgatcaggcc       300
ggtctgatgc tccgtatcga tcatgaaaat tacattaaag cgggtattga gtttgtcgat      360
gggaaattta atttaagtac cgttgttact cataaaacga gtgactggag tgtgataacg      420
ttagataaaa cggtacctta tatctggata aaggctgtca ggcggctgga tgcagtagag      480
attttctatt catttgatga taaaacttac acgctgatgc gtaatgcctg gttgcaggat      540
catattcctg tgaaagttgg actgatggcg gcttgtcccg atggtagtgg attcaatgct      600
aagtttgaat acttccaggt gaagcatctg ccggaccagc gcagagtgga atggctgaag      660
aagaatgcag aataa                                                       675
```

```
<210> 1217
<211> 690
<212> DNA
<213> B.fragilis

<400> 1217
attttaaata agtccagaat actacgaaaa tcaccccgtt ctgccctcgg gtacgcatgg       60
ggtgattttt ttataaccca tagtaggatg ataaagaaga tgaaagggat ttggccagag      120
gtatttcctg ccgtttttga agaaggggc ttgtatccat gccaccccaa gagggaactt       180
ccacttaaga gggatggtgc caacccgaaa ctgaaaggca gaaccattaa tttgcagaat      240
gcggttaaaa aatgcaaccg gttgtgccca ttgagatatg acagcattac agtcagtgaa      300
ggacgtttta tgtttaatgg gaaagtgact gccccgcaag tgagggagct ctttattcag      360
gagactgaca gtgaccgctt tcccgtcacc ctgcctgtgg tcttggatcc gggagagatc      420
aacgcaaaaa taggagatat cgtactggtg gaaggatccg gactgaacga ggagatgatg      480
caaaccttga tggctctcga cgaattcaga gggcgggact ttaccgggaa agagataaat      540
gaaattaaag aggctttcgg cggattcgtg ctggaacaga ttgtgaaaca tgccggcagc      600
cccgtaggaa actatctgta cgaggcctat cagaacaaac taaacgagaa gcaacaggcc      660
gaggcacgga aaacgctcgg catcggttag                                       690
```

```
<210> 1218
<211> 372
<212> DNA
<213> B.fragilis

<400> 1218
ttaataaata aaggagttat gaagaattat caaaaaaaga gcgtagcaca agatgcacgt       60
gtagagttgc atgacagtct tgccctgacg ggtgccgaag tatctatcaa tcatcttccg      120
gccggtgccg gagtcccttt tgttcattca cataaacaga atgaagaaat ttacggcatc      180
ctttcgggga agggctttat cactattgat ggcgaaaaga tagaattgca ggctggggat      240
tggctccgta ttgctccgga tggaaaacgt cagatttctg ctgcatctga cagtcctatc      300
ggtttttattt gtattcaggt gaaagcaggc tccttggaag gttataccat gactgatgga      360
gtcgtacaat aa                                                          372
```

```
<210> 1219
<211> 945
<212> DNA
```

<213> B.fragilis

<400> 1219
```
aacaaaaata agatgaaaga aaaagattta atccgtttta tggatcgcat gattgaagag    60
cgaaaagcgg aatatgcatt aggtacggct cacatttatc aagcgagcag aaatgccctt   120
tctgcttttc tgaaagcaca cgacattccg ttcaaaagag taaggcctga gttattgaag   180
cagttcgaac ggtttctcag acggcgggga aacagctgga acacggtgtc tacttatatg   240
cgggtgctca gggctgtcta taaccgggcg gtcgacaggc gtctggcacc tcacgtgcca   300
catctgttca aagctgtata taccggtact caggccgata tcaaacgagc tttgaaagcc   360
gaagaaatgg ggcagttgct cgacacgaag tgcacccgga agcaatcgga actattgcag   420
aaaactcatc acctgttcgt gctgatgttt ctttaaggg ggcttccttt tgttgacttg     480
gcttatatac aaaagaagga cctgaatggg aatatcctga cctatcatcg caggaaaacc   540
ggacgtcaga tcaccattac agttactaaa gatgccatga atatcattcg ggaatatatg   600
gatactacta cggagtctcc ctatttattc cctattctga gtgcagaggg aggagaggat   660
accatctatc gggagtatca gcaggcattg cgcatcttca attatcaact gacaaaattg   720
ggagaactgt tgggactgac taccgaattg acttcatata cagcccgcca tacctgggcc   780
actttagcct attatttgga agtgcacccg ggtattatcc gggaggcgat ggggcactcg   840
tctatcaaag taacagagac ttatctgaaa ccattcaata taaagaaact ggatgaaaca   900
aatttaagta ttatcagtta tgccaaacga tcttttgagg gataa                   945
```

<210> 1220
<211> 231
<212> DNA
<213> B.fragilis

<400> 1220
```
aatatgcaca atatggataa taaacaagaa agaacagttg ttcacgttga atataacgga    60
cagcattact attttggctc actctctgca atttatacga aattcagtcc taaagacttg   120
ggtatcgcat tggggacatt aagaaattat ggattgaaag aagaaaagcc gtaccagaac   180
tctctgtgta ctataagaaa aggttttttg ataacgatgc ctaaaaagta a             231
```

<210> 1221
<211> 276
<212> DNA
<213> B.fragilis

<400> 1221
```
ccagtctgca aagataagcc ctttcctttg ttatcacaaa tgataactat agaaaaaatg    60
aatgaacagc aacttttttat taaaatagga gataaaataa aggaaataag gcttgaaaaa   120
ggaataagcc aacaagactt ggcagctaaa tgcaactttg agaaagctaa tatgtcacgg   180
attgaagcag ggcgcaccaa tctaacaata aaaaacgcat ataaaataag tcttgcttta   240
ggagttagac taaaagacct attggatgta gaatag                             276
```

<210> 1222
<211> 183
<212> DNA
<213> B.fragilis

<400> 1222
```
acagatctaa ataaaaagac cttggggcgt agggagtttc tcatcggatg ttgtctttat    60
aggaaagaac ctataaaacc aacaaacatt atgaaagaat ttatgctgat cgcttctctc   120
gtcttgtcat tctgcattct tattttatgt agagactata tcgtatttat gctgaaaaaa   180
tga                                                                 183
```

<210> 1223
<211> 462
<212> DNA
<213> B.fragilis

<400> 1223

```
cgtatggcaa agatagagaa taaaacgaaa gaaaacccca agttagagca aaataagctc      60
tcggatggta gaatcagcct gtacttagag tattatttag gtagagaaga gaagcccgtt     120
ttagatgcga atggcaatca ggtatattat gaagatggca aaatgcaagg caaacccaag     180
ttttcggtga agcacaacag gcgaaaagag aacctgaatc tatatcttat ggataagccc     240
cgtactcctg ccaaacgtca acaaaataag gaaacactgg agcttgccac aaagatacgt     300
gccgaacgtg aacaagagtt aaagaaagt atgttgggat accgcctaaa gaaagattgt      360
accatcaact ttcttgatta cttccaagcc tacatagaca gctatacaaa gaaagattgc     420
gcatggtgca aattgcactt agccgtttca aagacttcct ga                       462
```

<210> 1224
<211> 192
<212> DNA
<213> B.fragilis

<400> 1224

```
agtatccaaa atcacagcca aagtcactat attctaggaa aatgggaagg aagatgctgg      60
gatatagaag acttcattat ttcattgaat tatcaaagca agttacagtt aacaatctat     120
ccccaacaat atcttgccca gtcagaacgt gaagttcaat tacaaaccaa ctccaataac     180
aatacaaatt ag                                                         192
```

<210> 1225
<211> 2547
<212> DNA
<213> B.fragilis

<400> 1225

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acaaatagaa aaatgaaaaa cgcaattgtt tccttactcc tgcttttgat ggtcacccag       60
tatgtgacgg cacagaaaaa agtgattaag atagcctgta tcggcaatag tataacgtat      120
ggtgtaggta cgcgcaatcc tgcgaaagac agttatcccg ctgtgctggg gcagatgctg      180
ggcgacggtt atgaagtccg gaactttgga gtcagtgccc gtaccatgtt gatgaagggt      240
gaccatcctt atatgaagga ggaacgctat cggcaggcat tggcttataa tcccgatatt      300
gtgaccatca agcttggaac caatgatacg aaaccgcaga actggcggta caaatcggat      360
tttaaaaagg atatggaaac gatgatacgg acgattcgcg ctttaccctc aaaacctgaa      420
atctacctgt gttaccctat tcccgcctat gctgtacagt gggggattaa tgacagtacg      480
attgtacacg gcgtgatgcc tgttatcgat cagctggctg ctaaatatcg attgaaagta      540
atcgatctgc atactccgct gataggtatg aaagagtgtt ttgccgatca tgtgcatccc      600
aatgaaaagg ccgctgcctg cattgcccgg gtcatttatc ggcaactgac gggtaaagaa      660
gcacctgaac acgtctccca gcctttcccc ggtcataaaa gcaagtggca gggattcgat      720
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ccgcgtgccc ggaagtcagg taccgatttc tattggaata tggtacagat gtacggtctc      960
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gccgatcatc cggataaagt ggcttgtatc tatgtcgatg ccccggtttg cgatgtgttc     1080
agctggccgg gacgttcgtc cggaaatgcc ggattatgga aggaatgtt ggacgaatgg      1140
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ctggcggatg cccgtattcc ggtgatttgt gtatgtggcg atagtgacag ggtagtgccg     1260
ttttccgaaa attcggcagt ggttcgtcaa cgttatacag caatgggagc tccgttcgaa     1320
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cagcgttttc cttatacaaa gttcactttt gttgcagccg gaattccttc gaccggcagt     1620
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ttacatttca tttacgatcc tttttattccg aagttggaca aagggcagat gcctgatgta     1860
attctgaacc atgagcgggt ggccaatcat tacctgcttc cttctgttaa tcttgcttct     1920
```

```
gagattgctg cccggatgcg gagtggtgaa ttcacatggg aacagtttgg cggcacacat    1980
cccaatcctt tgggacatgc ctattatgca gctaccataa acaaggtact cgatgaaatg    2040
tatgcccctt gcgctactgc caaagatgct gccaagcctc atgctcttcc tgccgtgcca    2100
ctggatgcat atagttatac aaatggcaga ttggtcgata tccggcaagc ccatataggt    2160
aaaggttggc agttggttgc tccatggact ccccggcttg ctgccgaaac gcgtccgggt    2220
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tatatccctt gggtgtatat gttcgatacg gagttaccga tgggaaaaca tcgtctgact    2460
cttcggatgt cgaaagacca tcatccgcag agtaagggta cgtcctgcca gatcaggcag    2520
tttgtggtaa atgattcttg tgaatag                                        2547
```

<210> 1226
<211> 222
<212> DNA
<213> B.fragilis

<400> 1226
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agaagaaccc ttgaactttg ggaccgggat gtggaacgtt ggattaactc cgaacgtgtg    60
ccggtgtact ctcctattac ctacttcttg tatgacttgc ctcgttggga cgggaaggac    120
tacatccggg cgctggcccg ctacgtacgt acctttcgac gaatcggcta taagcgaact    180
gaagcgttat gcttcgttca tagcgaccag caatcacagt ga                       222
```

<210> 1227
<211> 1194
<212> DNA
<213> B.fragilis

<400> 1227
```
acacttatga aaaaattaat ggccatgttg ctccttgcgg gcagcataca aggagtctat    60
gcccaaaaga cggaaaagaa agagatgttt cttgaaaata aatcgttgta tgaagagctg    120
accaacgtgc agaagaagac ggataagttc aatctgtatc tcaatatgca aggtagtttc    180
gacgccaact tccgcgacgg tttcgacgaa ggagtattca agatgcgcca acttcgtatc    240
gaagccaagg gcaacctcaa cagctggctc tcctatcgtt atcgccagcg tctgaaccgt    300
tcgaacgagg gaggaggaat gatcgacaac ataccgactt cgattgacta tgccggtatc    360
ggtgtaaagc tgaacgacca gttctctttc tttgccggta aacaatgcac cgcttacggc    420
ggtttcgagt tcgacctgaa tccgattgac atctaccaat acagcgacat gatcgagaat    480
atgagcaatt ttatgaccgg attgaacatc ggttataaca ttacacctac ccagcagctc    540
aacttgcaga tcctgaacag tcgcaacagt tcgttcgaca agacgtatgg aatcaccgaa    600
gactcggaag gcaaacttcc ggacctcaag tcgggcaaga tgcctttggt ctataccctg    660
aactggaatg gtaactttaa tgaggtgttc aaaacccgct ggtcggcttc cgtcatgagt    720
gaagccaaag gcaagaacct ctattattat gcagtgggca cgaactgaa tctggataag     780
ttcaatatgt tcgtcgattt catgtattcg caggaaggca tcgaccgtaa cggtaccatc    840
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gaaacggcct ccgtcaccaa agcagccgac ggcattgaaa aaggtaacta ccgtacttcc    1020
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acctacgtag ggcgttcata cgacttcaca catcgtgcca aagtactggg acaggagaat    1140
tacagtacta accgattgtc tttaggcttc atctaccaac tgccgatgtt ctga          1194
```

<210> 1228
<211> 189
<212> DNA
<213> B.fragilis

<400> 1228
```
gtgacaagga agaacaatat tggccggaac atcctatctt cgcaggaaat aagtgactcc    60
tatgaaagaa agaatattaa atatagagac cgtccatcaa tgcaactgct gcctgggctg    120
caaaacactc catccgctgg taagtgtaat cgacctgtca aagagcgatc tggaacagca    180
```

aattattaa   189

<210> 1229
<211> 537
<212> DNA
<213> B.fragilis

<400> 1229
acagaaagga aaaaaaatat ggaaaatgtt attcagatac aatattatca atcgccatgt   60
ggagaactga tattgggggc atatcgggaa aaactttgct tatgtgattg gaagatagaa   120
gaacgcagga tcatcatcga cagaagaata caaaaagagt tgcaagcttc ttataaggag   180
ggcatatctg aagtaatcac acgaacgatc ggtcaactgg atgaatattt tgccggacga   240
agaactacat tcgatattcc tttgcttctt gtaggtactg attttcagaa aactgtttgg   300
aacgaactgt tgaacattcc ttatggaaaa acaatctctt atgcagggtt gtctcaaaag   360
ttggggaatc ctaaagctat ccgtgccata gcttccgcca acggagcgaa ccctatctcg   420
atacttgttc cttgtcatcg tgtgatcggc agtgaccgta aattagtagg gtatggcggt   480
gggctgcctg ctaagaagat cttgcttgac ttggagtctt ccgataggtt attctaa   537

<210> 1230
<211> 603
<212> DNA
<213> B.fragilis

<400> 1230
tgtgttaacc ttgacagaaa taataaacat actatcatta tgaaaaagag tcttgtatat   60
acaaaaacgg gtgataaggg aacgaccggc ctgataggcg ggacgcgtgt tccgaaaacc   120
catatccgtc tggaagcata tggaacggtc gatgaactga attcgaatct gggcttgctg   180
gcaacttatt tgatggacga gcatgatttg aattttgtgc agtccgtgca ggataaattg   240
tttgccatcg ggtcgcatct ggccactgat caggagaagg tgcaattgaa tgatgtcagt   300
attattactc ccgctgaggt ggaggctatt gagcgcgaaa tcgatgccgc cgacgaaatt   360
cttccacctt tacattcttt tattattccg ggagggagtc gtggctctgc ggtttgccac   420
gtttgccgta ccgtttgccg gagggccgaa cgccggattc ttgcattatc cgaaagctgt   480
acaatctcag ccgatttact ggcctatatc aaccgtttat cggattattt atttgtcttg   540
tcccgtaaaa tgaatttta tgaaggaaaa gacgaaatat tttggaataa tagttgcaag   600
tga   603

<210> 1231
<211> 237
<212> DNA
<213> B.fragilis

<400> 1231
gaaattaatg atcaccttac ataccacata cccgcaatct atgccctaca cagcaaatgt   60
acagaatttc cggatgaaac cagccggaga gttactaaaa ttactttcta ttttttgttt   120
ttacctaaag atcttaccac agctaaaaat attaatatcc gaattttctc tactgccata   180
gacttccatt atatccaatc cctacagtcg ctcacgtttc ggagccatac tccgtaa   237

<210> 1232
<211> 279
<212> DNA
<213> B.fragilis

<400> 1232
cgcagagccg acccacgcac gctacccgaa cttctgatag aaaagcatga cattctaatt   60
gaaaaaattg gcacacggtt gaaaacccat gccacagaaa cagatatagc acggttgttt   120
atcgcattag tggaataccg tttcatgcgg aagtgtccca tcaagacttt cagaaatgcc   180
tgtacaacca gtttaatgaa caagaaatcg ttcatgaaag aggtcttcag aaagcataca   240
aaaatctcat ttcgccactt ggaaacggca aaaagttga   279

<210> 1233
<211> 519
<212> DNA
<213> B.fragilis

<400> 1233

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atattattag aattagatca aggagaaaga gttatgaatg acagaaagat tttagtagcg    60
tacttctcat gtagcggcgt aactaaagct gtggcagaga aattggctgc aattactgga   120
gcagatctgt atgaaattaa gccggaggtt ccttatacgg aggctgacct ggactggaat   180
gataagaaaa gccgtagttc ggtggagatg agagatgctc tctcacgtcc tgccatttcc   240
ggtacgttgt ttcatccgga agagtacgaa gttctgtttg taggctttcc ggtctggtgg   300
tatattgccc ctactataat taatacattt ttggaaagtt atgactttgc cggtaaaata   360
gttgttccgt tcgctacatc gggaggcagc ggcataggaa attgtgaaaa gaatcttcat   420
aaagcatatc cggatatcgt gtggaaagat ggaaagcttt taaatggacg gataacgcgg   480
gatctggtta cggaatggtt tgaaaagatt aggttgtaa                          519
```

<210> 1234
<211> 1347
<212> DNA
<213> B.fragilis

<400> 1234

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aatgtggcag atttccgcag cttacatttt ctaagaagac agaatcattt tatgataaac    60
gaatccccgg cgcttgcgtc ggggattttt tgtatctttg tcctcacaat gaaaaagtat   120
gtagatgtca tattaccttt gcctctgccc cgttgcttta cctattccct tccggacgaa   180
gggggctgaag aggtgcaaat aggttgccgg gtagttgtac ctttcgggcg aagaagtac   240
tatacagcca ttgttcgcaa tgtgcatcac tatgcaccga ccgaatatga agtcaaagag   300
atctctaccg tacttgacac ctctccgata ctgctgcccg gtcagttccg gttctgggaa   360
tggctggccg attattatct ttgtacgcag ggtgatgttt acaaagccgc attgccttcc   420
ggcctgaagt tggagagcga gacgattgtg gagtataatc ccgactttga ggcggatgct   480
cctctttctg aacgcgagca actggtgctc gacctgcttg ccaaagaacc cgagcaatgt   540
gtcaccaaac ttgagaaaga gagcggattg aaaaacattc tcaccgttat caagtcgctg   600
ctcgacaagg aagctctgtt tgtaaaagaa gagctccgcc gcacttataa acccaaaacg   660
gaagcccggg tccggctggc ggcagacgcc tccggtgaag agaatctccg gcgtatcttt   720
gacgagctgg agcgcgctcc gaaacagttg gcgttgttga tgaagtatgt ggagctttcc   780
ggcgtgttgg gggacggtgc atccaaagaa gtgtccaaga aagaacttct gcaacgtgcc   840
tctgcttctc ccgctatttt caacggattg gtagaaaaac agatattcga ggtctattat   900
caggaaatcg ggcggttgaa ccgtttggtc ggaaagacgg tagaactgaa cgtgctgaac   960
gaacaccagc aacgggctta tcatgaattc atgcagagct ttcaggagaa gaatgtctgt  1020
ctgctccacg gagtgacttc cagcggaaag accgaagtat acatccacct gatagaagag  1080
acgttgaggc aaggcaggca ggtgctttat ctgttgcccg aaatagcatt gactacccag  1140
atcaccgaac ggctgaaacg ggtgttcggt tcccgggttg ggaatctatc actccaagtt  1200
ccccgacgcc gagagagtag agatctggca aaagcagttg acggaggagg gttacgacat  1260
cattctgggg gtacgctctt cggtgttcct cccgtttcgg aatctcggac tggtcattgt  1320
ggacgaggaa cacgaaaata cgtataa                                      1347
```

<210> 1235
<211> 987
<212> DNA
<213> B.fragilis

<400> 1235

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aaaactaaag aagaatatag tatgataaag aaactatgca taatccttct gtctgtatgt    60
actgttgcac ctgtcatggc gcaacaatac agcagcagcg atgatgcgtc gtttgctcct   120
aaaaaaggtc agtggcaagt atccatggta atgggtagtt cgcaaatgtt caacaacaat   180
acggagaact atctattgcc tacctactgg aacggacaaa actttagctt ccgaatgtg    240
ggattgggca ataatacgtc cggaaaccaa tcctccgatc cggctactta ccttcaactg   300
ggagatttga attctaataa tttggtcaat atcatcggta tacagggaaa atatttcctg   360
acagaccgtt gggatgtcaa cctgatgttt agcatgaata tcggcgtaac gcccaaaaag   420
```

```
gattatatcg agggagacaa gacggttacc gatatgcaga ttccggccct tcaatatctg    480
gaaggcagaa tcaaaaacaa ctggtcggtt aatattggct caaactatta cttcaatacg    540
aagaacgaac gcatcaatct gtatgtaggc ggcctgttgg gctggcaaat gggaagaata    600
gaaaccacgc ttccgtatac tggaatcatg gtatctgata aggatatgaa cacagatggg    660
acggataccg atttacagcc gactcccgat gagaacggcc aggacaatgg tccggtcgtg    720
gacgataacg acgtcactgg tacacctctg gaggtttata tccccaacag cagagccgga    780
cagatattcg gtttgcgtgc ggcaaccgtc gcaggcatcg agtacagtat aggcaaggga    840
ctgattctgg gatttgaagt tcagccggta gcttaccgct atgacatgat tcagattatc    900
ccgaaaggaa ccccggtcta caaggtgggg catcacaaca tcaacttgtt tgcattgccc    960
aacctgaagc tcggatttag attttaa                                        987
```

<210> 1236
<211> 972
<212> DNA
<213> B.fragilis

<400> 1236
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gtcatgaaag aattaaaaag actaagcttt gtagtggtca cactactact ttccacgatg    60
atggctttcg cgcaaaagcc taatattcac atccttgcta cgggtggcac aattgccggt    120
acaggcggtt ctgccacttc caccaactat acggccggcc aggtagcaat cagtacgctg    180
ctcgatgcag tacccgaact caaggatatt gccaacgtga ccggtgagca aattgtacgt    240
atcgcatcgc aggacatgag cgatgaagtg tggctgatac tcgccaagaa gatcaaccaa    300
ctcctgaaac gcccggacat cgacggtatc gttatcactc acggaacaga tacgatggaa    360
gagactgcct atttcctgaa cctgaccgta aaaagtaaca aacccgtggt acttgtagga    420
gccatgcgcc cttctactgc gctgagtgcc gatggcccgc tgaacctcta caatgccgta    480
gtcactgccg gagccaaaga atctatcggc aaaggtgtgc tgatagccat gaacggactg    540
attctcggag ctgaaagcgc aataaagatg aatacgatcg acgtacaaac tttccaggca    600
cccaactccg gtgcattggg ctatatcttt aacggaaaag tattctataa ccaggctccg    660
ctcaagaaac atacgaccca atctgttttc gacgtaacca acctgaactc tcttcccaaa    720
gtaggcattg tctacagcta ctcgaacatc gaccccgata tggtgacccc actgttacat    780
catgactaca aaggtatcat ccatgcggga gtaggaaacg gcaacttcca caaaaacatt    840
ttaccggtac tgctggaagc acgcaagaaa ggaatcctcg tggttcgctc ctcccgcgta    900
cctaccggtc ctaccacaat ggatgccgaa gtagacgata ctcaatatca gtttttgctt    960
ctcaggaact ga                                                        972
```

<210> 1237
<211> 1179
<212> DNA
<213> B.fragilis

<400> 1237
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aaaaaaggag aaaaaaagaa taaaagatcg cataaacact tctattttca gagaataaac    60
cgtattttag cagaaacatt taaaacagtc aatatcatga caagcaaaga taattattgt    120
gtcattatgg gcggaggtat cggcagtcgt ttctggccgt ttagccgcaa gacaatgcct    180
aaacagtttc tggatttctt tggaacaggt cgttcactgt tgcaacagac tttcgaccga    240
ttcaacaaaa ttattcctac ggagaacata cttatcgtaa ccaatgcgat atacgcagac    300
ttggtaaaag aacaacttcc ggaattagat ccaaaacaaa tcttgctgga accggcaaga    360
agaaatacgg ctccgtgcat tgcatgggca tcatatcata tacgtgcttt aaatccaaat    420
gccaacatcg tagttgcccc ttccgatcat ctgatcttaa aagagggaga attttttagcc   480
gctatagaga aaggactgga ctttgtatca aaatctgata aacttctcac tttaggtata    540
aagcccaatc gtccggaaac cggatacgga tatatccaaa tagcagagca ggaaggagac    600
aacttctaca agtaaagac atttactgaa aaaccggaac tggaacttgc taaggttttt     660
gttgaaagtg gagagttcta ttggaattca ggccttttca tgtggaatgt caatacaatc    720
attaaagcag gagaaactct tctaccggaa ttagcatcta agctggctcc cggaagagag    780
atttatggta cacctgaaga aaaagacttt atcgaagaaa acttcccggc atgccctaac    840
gtttcgatag acttcgggat tatggaaaag gctgataatg tatatgtctc tttaggagac    900
ttcggatggt cagaccttgg aacctgggga tcattatatg atttatcacc taaagacgaa    960
caaagaaatg taactctaaa atgcgactca ttgatttaca acagcaatga caatatcgtt    1020
gtattaccca aaggtaaact tgcagtgata gaaggtctgg aaggtttttt ggttgccgaa    1080
```

```
tcagataatg tattactgat ctgcaaaaag gacgaagaac atgccatacg caagtatgtg    1140
aatgacgcac aaatgaaatt aggagaagat tatatttag                           1179
```

<210> 1238
<211> 594
<212> DNA
<213> B.fragilis

<400> 1238
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ttatttatgg aaagtgaaaa agaaaaaatg ggtacaggca ggctttacga tgctaattat    60
gatacagaat tgatagccga acgtcaggct tgcaaagagt tgtgttatac cttaaatcat    120
ttgcctccct cgcagatagc tgaacgggag gccattatcc gtcggttgtt ttgcaagacg    180
aaagaacgtt ttctgttgga acagcctttt tattgtgact atggctataa cattgagatt    240
ggtgaaaatt tctatgccaa tatgaactgt gtcattctgg atgaggctaa agtaacgttc    300
ggtgataatg tctttatcgc tccatcctgt ggcttctata ccgcgggtca tcctttggat    360
gtggaacaga gaaatcgagg gttggaatat gcccgtccca ttcgtgtcgg aaataatgtg    420
tggattgggg cacaagtgtg cgtattaccg ggcgtgacga ttggtgacaa cacagtgata    480
ggtgcgggaa gtgtagtaaa tagagatatt cctgccaatg tgattgctgc gggtaatcct    540
tgtcgcgtga ttcgggaaat tacggaagaa gataaaacaa aatatttatt atag          594
```

<210> 1239
<211> 1389
<212> DNA
<213> B.fragilis

<400> 1239
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agacatatgg aaaaacagaa taatcatata gaccgaagag gattcctgaa aattgtgggc    60
atcagtgccg ctacaacgac agcggctctt tatggctgcg gctccggaac taaaagcagc    120
caaggacgga atgcctcctc tcctgttccg acagaccaga tgacttaccg ctcagtaggc    180
ggaatcaaag ataaagtatc cctcctggga tatggctgta tgcgttggcc taccgttcct    240
tccccggaag gaaaaggaga ccttatcaat caggaagctg tcaacgaatt ggtagactat    300
gccattgctc atggagtgaa ttatttcgat acatcacctg tatacgtaca gggctggtcg    360
gaaaaagcaa ccggtatcgc tctcaagagg catccgcgcg agaaacttta tatagccacc    420
aagctatcga atttctctaa cttctcacgc gaaaactcac ttgcgatgta tcatcaatca    480
ttcaaggata tgcaagtgga gtattttgat tactacctgc tgcacgccat tggcggaggc    540
gggatgaagg tattcaacga gcgttatatc gataacggta tgctggattt tcttctcaag    600
gaacgagagg ccggacgcat acgtcatctc ggctggtcat tccatggtga cgttgaggtt    660
ttcgaccagg tacttgccat gcacgatacg gcgaaatggg attttgtaca gattcagctc    720
aactatgtgg actggcgcca cgcaaccgga aacaatgtaa atgcggaata cctgtacggc    780
gaactggcca aacgaaatat tgccgctgtg atcatggaac cgctattggg cggacggtta    840
tcgaatgtac cggagcacat cgtgggacgg ctaaaacaac gacgtcccga agacagtgtg    900
gcatcgtggg cattccgctt cgccggttca ccggaattgg tactgaccgt attgagcggt    960
atgacttata tggagcactt acaggataac atccgcactt attcaccact ggttccgctg    1020
accgatgacg acaaagagta tctggaagaa accgcgcaac tgatgatgca ataccctacc    1080
atcccctgta atgactgtaa atattgcatg ccctgtccat acggcatcga tattcctgcc    1140
attctcgtac attacaacaa gtgtgtcaac gaagggaata ttccgcaaag ccagtcaagt    1200
gaaaactaca aagaagcacg acgcgctttc cttgtaggct acgaccgcag tgtacctaaa    1260
ttgcgacaag ccagtcattg catcggatgc aaccaatgta ccccgcattg tccgcaatcc    1320
atccacatac cggaagaact gcatcgcatc gatcgttttg tagaacagct caagcagggg    1380
acactatga                                                           1389
```

<210> 1240
<211> 186
<212> DNA
<213> B.fragilis

<400> 1240
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aaagcaatgg aacaaggcgt ttggcaagag atagaacagt tataccaaaa gtttcagaaa    60
cttggtatca atgaagcggt ggactatgat agtactacct gtattctctt attacccatt    120
```

```
ccacagccat tgaaggctca acgcttacgg aacttgatac gcagcttcct ttcgacgagg    180
gagtaa                                                                186
```

<210> 1241
<211> 201
<212> DNA
<213> B.fragilis

<400> 1241
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cttgttattt gcgcacaaga acctgacaac ctgcaaaaga cgttaacaat gttaattgaa     60
gagaggtata aggatgaaga caccggttca ggcggcgtaa actcacttcc gaaacttgag    120
ctatcttatt cagccggtgt ctgttttttc ttattaaagc aagcaaaaag gacaattatc    180
aacttgaaaa taaagaaata a                                               201
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<210> 1242
<211> 1158
<212> DNA
<213> B.fragilis

<400> 1242
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aaagactccc gttttatttt tgggtatccc ttgcgttggc ttcgtgtcag ggggggcaag     60
aaagcagtga atcaggctct gcctgtgatt gatatgaatg aagattatcc cgaaaaggag    120
atcgtgttgc aggatattgc tgacataagc tatattcctt tggagactaa cgacgaattt    180
ctgttcgacg gttcggttga agtggtcacc gatcaatatg tgataaccaa aggacatcgg    240
ggaaacgacg tctgcttctt cagccggcag ggaaaagcac tcaaccgcat ccacagggtc    300
ggtaacggcc cgggtgaata caaggatatc ggttcgatgg atgtaaaccc ggcgaacggc    360
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ttcaagcact cttttacttt ccctgaaggg aaacggatga gtcgcatgtg cctgttctct    480
cccgactatt tgatagcgga acaggagtca aaggtgccgg acgatcagga tgccaacttc    540
tatccttatc ttttggtctc tacccgggac gggcatctgg attcactgga ctatgtgcag    600
aaaagaaata ttctcgtcaa gcttattgtc aatgcggaaa accattcata cgcttatctt    660
ctggaaccct ctttgattcg taatggctcc cgctttttata tcggcaatcc cgactcggat    720
accttgtttg caatgaatcc ggaccgtacc ttagagccat tgctcgtccg tactccttca    780
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tttctgacta agcaacctat ggaagtgccg atgaacagta tcgagtcatt ggatctgaaa    900
agtgaagagt ggctgtacga ctgtcgcacg caggaagtct gccgttactt gttgaagaat    960
aaagacgatg cttcgaaacg tgtggacggt atcatgttct tttgctatcc cgaagattgc   1020
ggcttggctg ttctgaagtc cgaagacctg atggatgctt acgaagccgg tcagctgagc   1080
ggtgaattga aagagatagc agccggcctg aaagccgatg acaatccggt attgatgttg   1140
attcacttca aaaagtaa                                                  1158
```

<210> 1243
<211> 234
<212> DNA
<213> B.fragilis

<400> 1243
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atacgaaagc ttatgtattg gacattggaa ttagcatcta aactggaaga tgctccttgg     60
ccggcaacta aggatgaact gattgattat gccatgcggt cgggtgctcc tcttgaagtg    120
attgaaaacc ttcaggaaat ggaagatgaa ggcgaaatct atgaaagcat agaagatatt    180
tggccggatt accccagtaa agaggacttc ttctttaacg aggaggagta ttga          234
```

<210> 1244
<211> 786
<212> DNA
<213> B.fragilis

<400> 1244
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tctaagatta gcttcttcac ttcacggatg gactcttcgg gcgaaagccg ggatacttgc     60
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